

FIG. 1A

1					50	
CTAG_HUMAN	NY-ESO	(1)	MOAEGRCGTGGSTGDAADGCGCGCTGTPDGPCCGNACGCGEAGCATGCGGPRGAGA			
AAD05202	- CAG-3	(1)	MOAEGRCGTGGSTGDAADGCGCGCTGTPDGPCCGNACGCGEAGCATGCGGPRGAGA			
CAA11044	- LAGE-1a	(1)	MOAEGRCGTGGSTGDAADGCGCGCTGTPDGPCCGNACGCGEAGCATGCGGPRGAGA			
CAA10194	- LAGE-1s	(1)	MOAEGRCSTGGSTGDAADGCGCGCTGTPDGPCCGNACGCGEAGCATGCGGPRGAGA			
CAA11043	- LAGE-1b	(1)	MOAEGRCSTGGSTGDAADGCGCGCTGTPDGPCCGNACGCGEAGCATGCGGPRGAGA			
CAA10196	- LAGE-1L	(1)	MOAEGRCSTGGSTGDAADGCGCGCTGTPDGPCCGNACGCGEAGCATGCGGPRGAGA			
AAH02883	CT-2	(1)	MOAEGRCSTGGSTGDAADGCGCGCTGTPDGPCCGNACGCGEAGCATGCGGPRGAGA			
	Consensus	(1)	MOAEGRCSTGGSTGDAADGCGCGCTGTPDGPCCGNACGCGEAGCATGCGGPRGAGA		51	100
CTAG_HUMAN	NY-ESO	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRGGARPPNSRLLEFFNAMPENPPM			
AAD05202	- CAG-3	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRGGARPPNSRLLEFFNAMPENPPM			
CAA11044	- LAGE-1a	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRGGARPPNSRLLEFFNAMPENPPM			
CAA10194	- LAGE-1s	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRGGARPPNSRLLEFFNAMPENPPM			
CAA11043	- LAGE-1b	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRGGARPPNSRLLEFFNAMPENPPM			
CAA10196	- LAGE-1L	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRGGARPPNSRLLEFFNAMPENPPM			
AAH02833	CT-2	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRGGARPPNSRLLEFFNAMPENPPM			
	Consensus	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRGGARPPNSRLLEFFNAMPENPPM			

FIG. 1B

			EPITOPE SEQUENCES	
			Simard et al.	
			Appl. No.: Unknown Atty Docket: MANNK.032A	
			101	150
CTAG_HUMAN	NY-ESO	(101)	EAEIARSEINQDAIPLEVP	PCVNIKKNITVSGNNLTNNNTAADRRQQLQIS
AAD05202 - CAG-3		(101)	EAEIARSEINQDAIPLEVP	PCVNIKKNITVSGNNLTNNNTAADRRQQLQIS
CAA11044 - LAGE-1a		(101)	EAEIARSEINQDAIPLEVP	PCVNIKKNITVSGNNLTNNNTAADRRQQLQIS
CAA10194 - LAGE-1s		(101)	EAEIARSEINQDAIPLEVP	PCVNIKKNITVSGNNLTNNNTAADRRQQLQIS
CAA11043 - LAGE-1b		(101)	EAEIARSEINQDAIPLEVP	PCVNIKKNITVSGNNLTNNNTAADRRQQLQIS
CAA10196 - LAGE-1L		(101)	EAEIARSEINQDAIPLEVP	PCVNIKKNITVSGNNLTNNNTAADRRQQLQIS
AAH02833 CT-2		(101)	EAEIARSEINQDAIPLEVP	PCVNIKKNITVSGNNLTNNNTAADRRQQLQIS
Consensus		(101)	EAEIARSEINQDAIPLEVP	PCVNIKKNITVSGNNLTNNNTAADRRQQLQIS
			151	200
CTAG_HUMAN	NY-ESO	(151)	SCVQQLSLMWITQCFLPVFLAQ	PSGQRR
AAD05202 - CAG-3		(151)	SCVQQLSLMWITQCFLPVFLAQ	PSGQRR
CAA11044 - LAGE-1a		(151)	SCVQQLSLMWITQCFLPVFLAQ	PSGQRR
CAA10194 - LAGE-1s		(151)	SCVQQLSLMWITQCFLPVFLAQ	PSGQRR
CAA11043 - LAGE-1b		(151)	SCVQQLSLMWITQCFLPVFLAQ	PSGQRR
CAA10196 - LAGE-1L		(151)	SCVQQLSLMWITQCFLPVFLAQ	PSGQRR
AAH02833 CT-2		(151)	SCVQQLSLMWITQCFLPVFLAQ	PSGQRR
Consensus		(151)	SCVQQLSLMWITQCFLPVFLAQ	PSGQRR

FIG. 1C

CTAG_HUMAN	NY-ESO	(181)	-----	201
AAD05202	- CAG-3	(181)	-----	
CAA11044	-LAGE-1a	(181)	-----	
CAA10194	- LAGE-1s	(181)	-----	
CAA11043	- LAGE-1b	(201)	ENVMFESAPHI	
CAA10196	- LAGE-1L	(201)	ENVMFESAPHI	
AAH02833	CT-2	(201)	ENVMFESAPHI	
	Consensus	(201)		

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

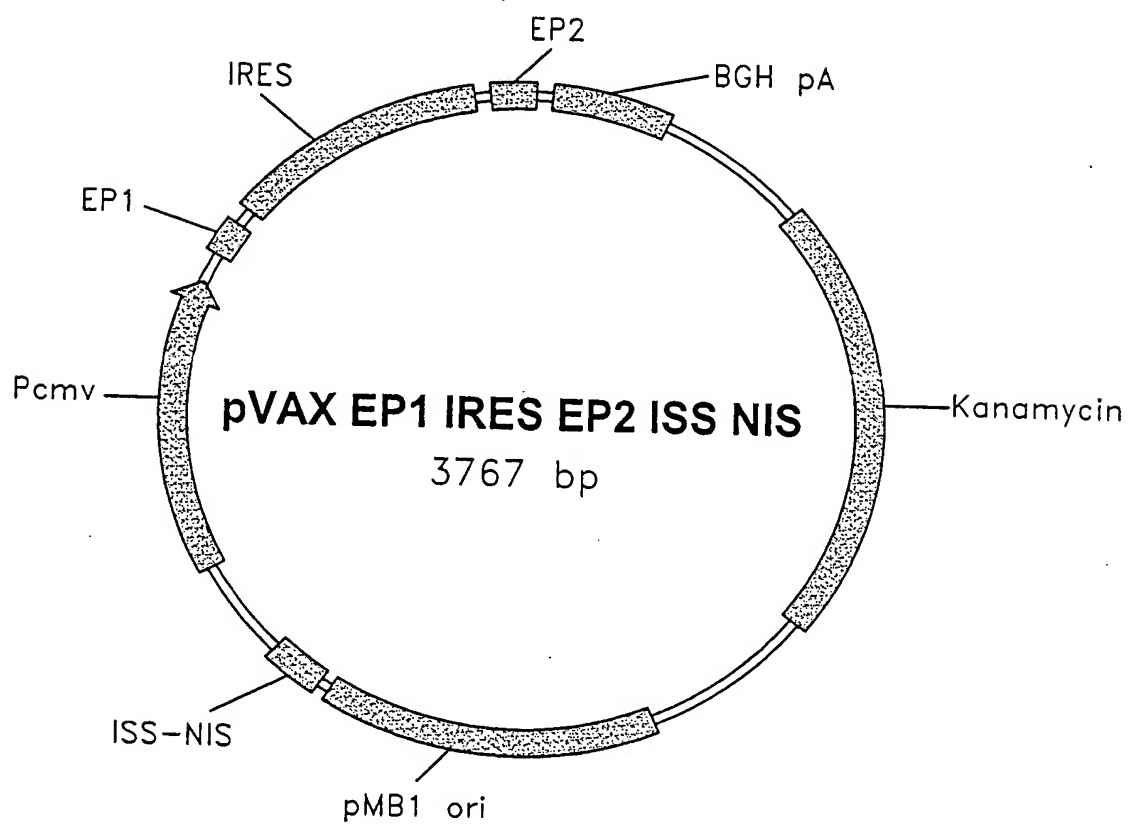
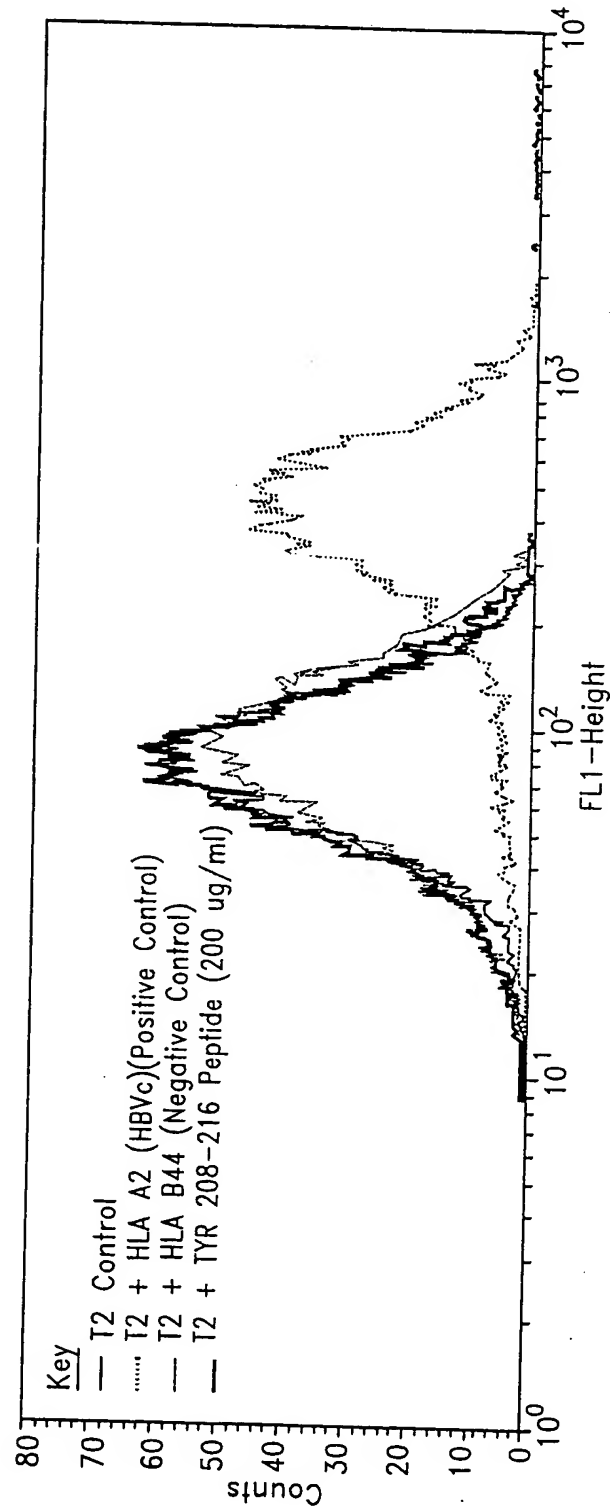


FIG. 2

FIG. 3A

FACscan Analysis of Binding Assay to Determine the Binding Ability of Tyrosinase 208-216 Peptide to MHC Class 1

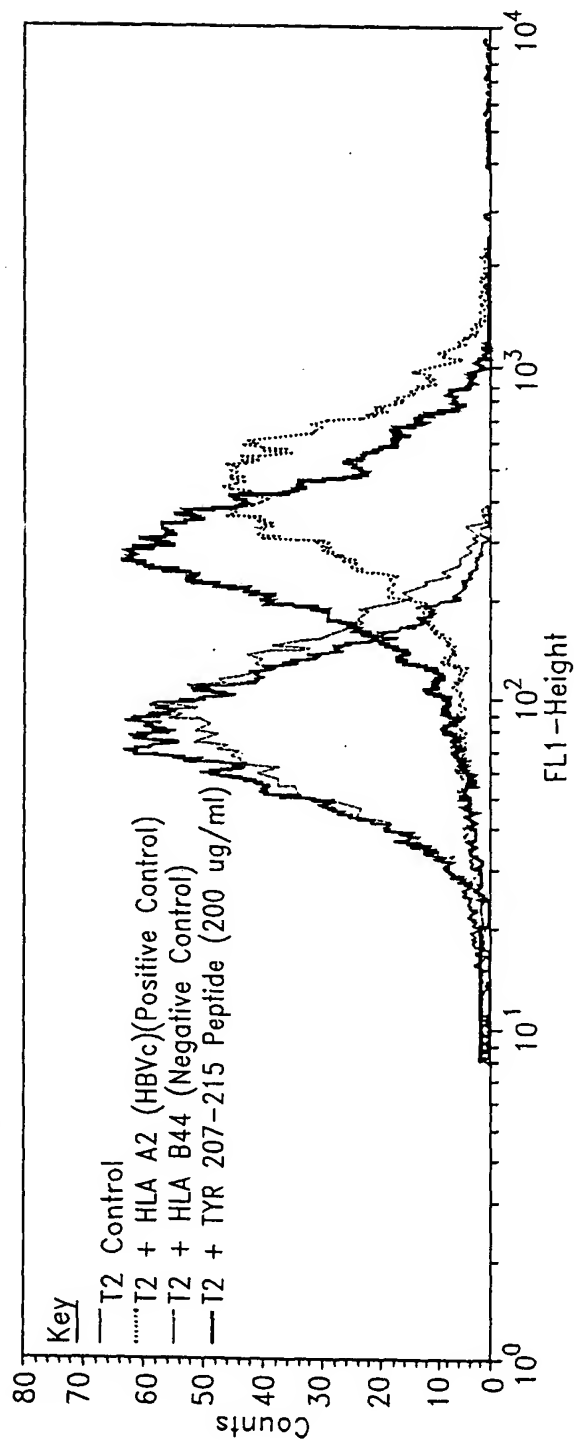


F1 (HLA A2 Peptide) = 3.13

F1 (TYR 208-216 Peptide) = 0.01

FIG. 3B

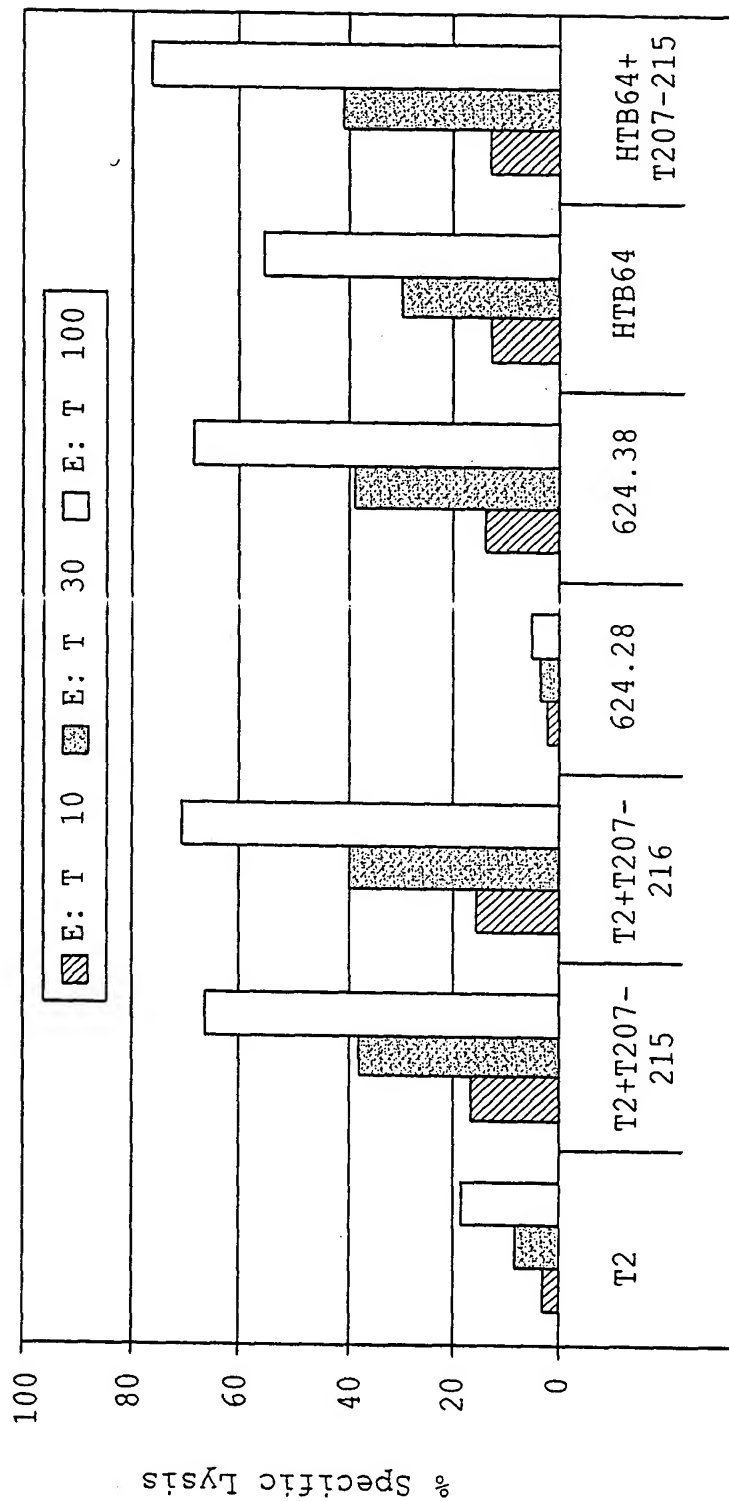
FACscan Analysis of Binding Assay to Determine the Binding Ability of Tyrosinase 207-215 Peptide to MHC Class 1



F1 (HLA A2 Peptide) = 3.13
 F1 (TYR 207-215 Peptide) = 2.00

FIG. 3C

HLA A2 restricted and tyrosinase specific lysis by CTL from Tyr207-215 IVS blood



CTL from Tyr 207-215 IVS blood

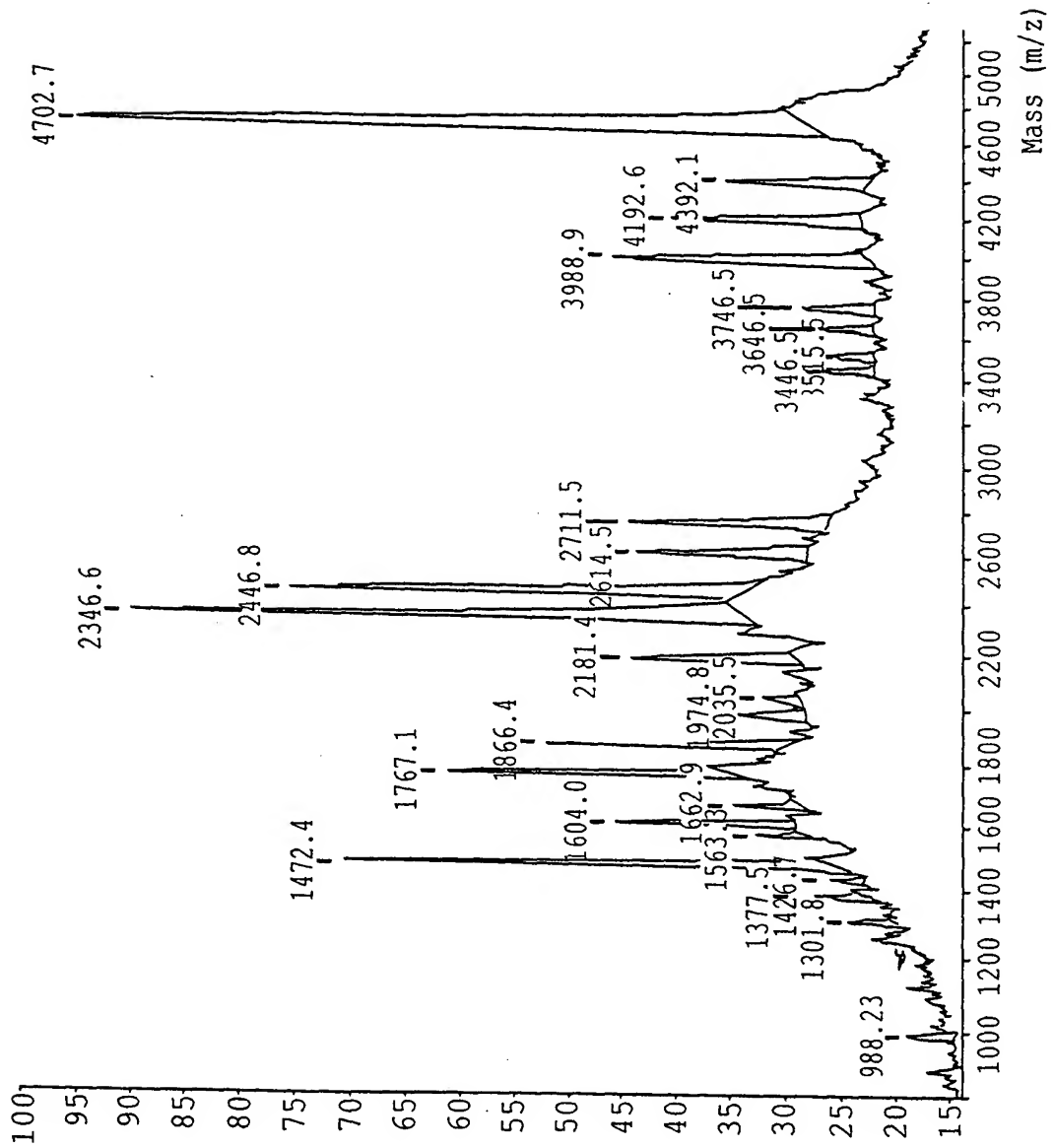
EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

FIG. 4



EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

FIG. 5
Comparison of Peptides Binding Affinity to HLA A2

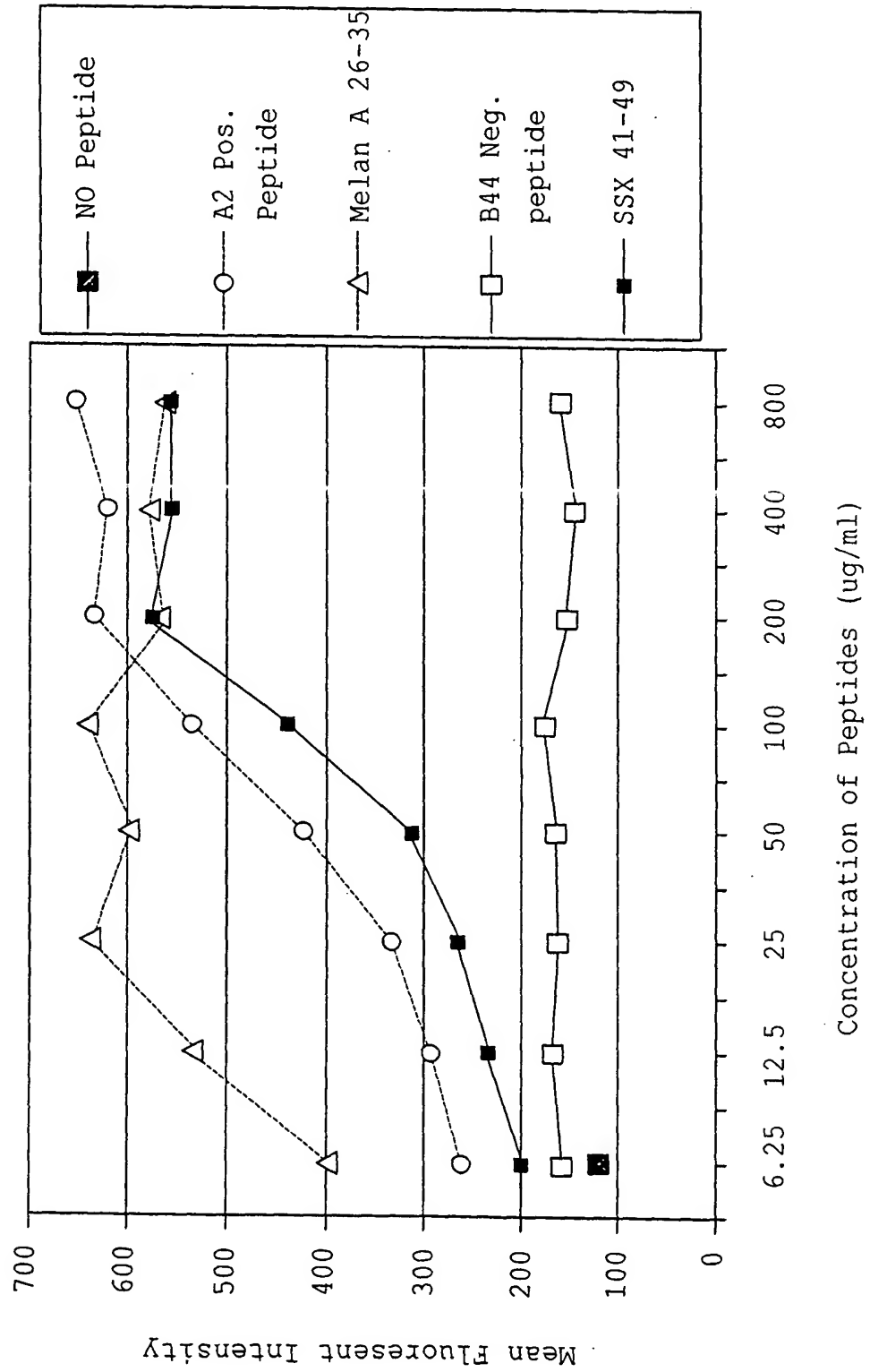


FIG. 6

SSX2₄₁₋₄₉ specific lysis by CTL from peptide
injected HHD1 mice

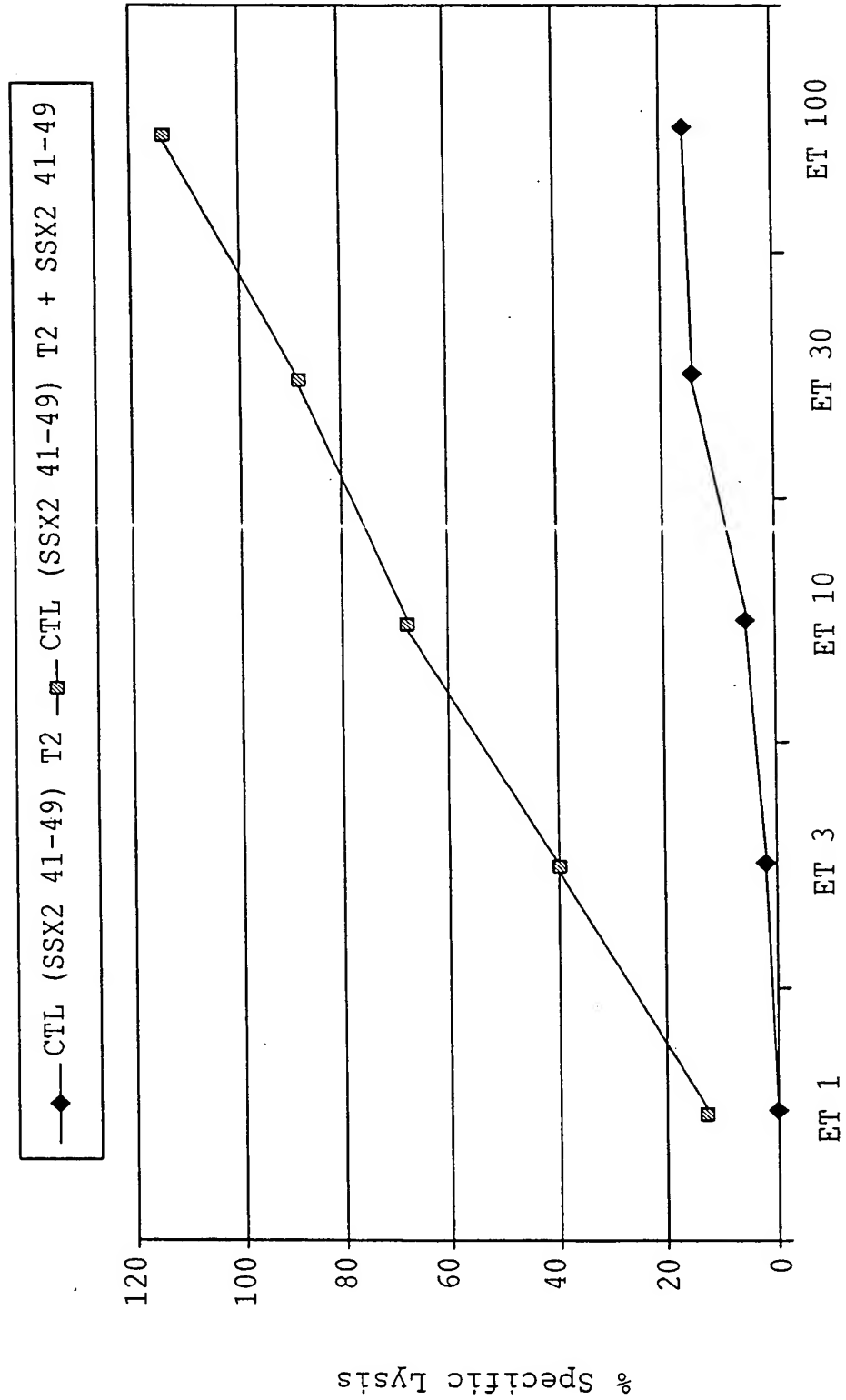
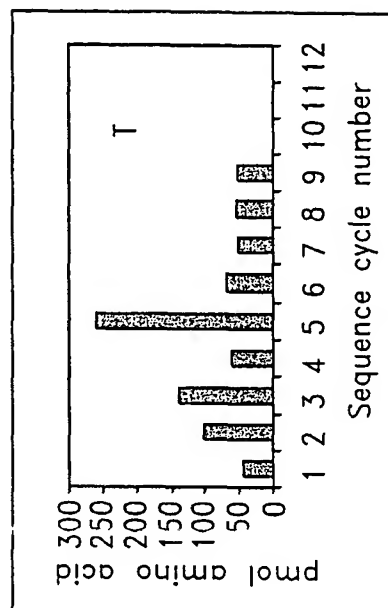
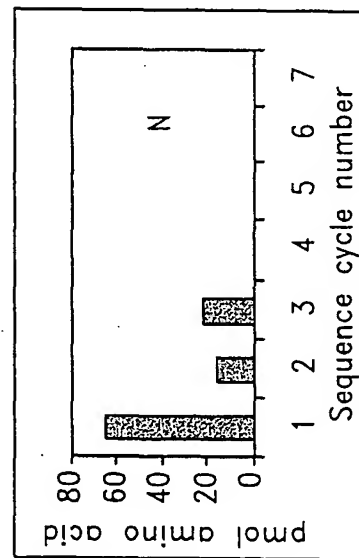
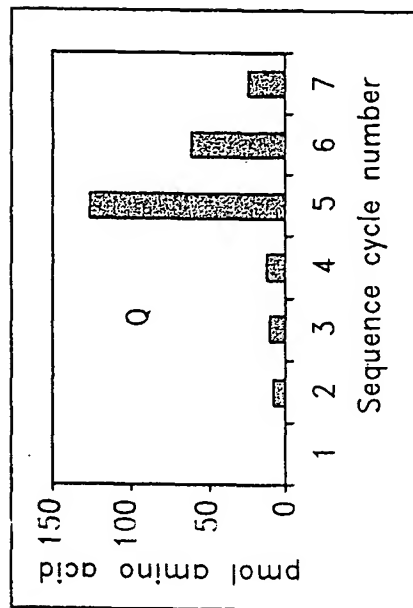
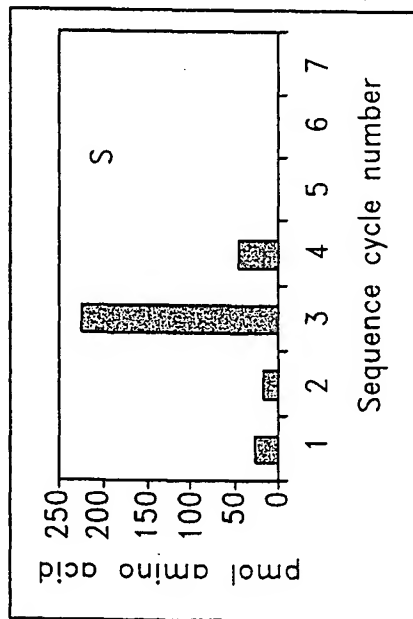


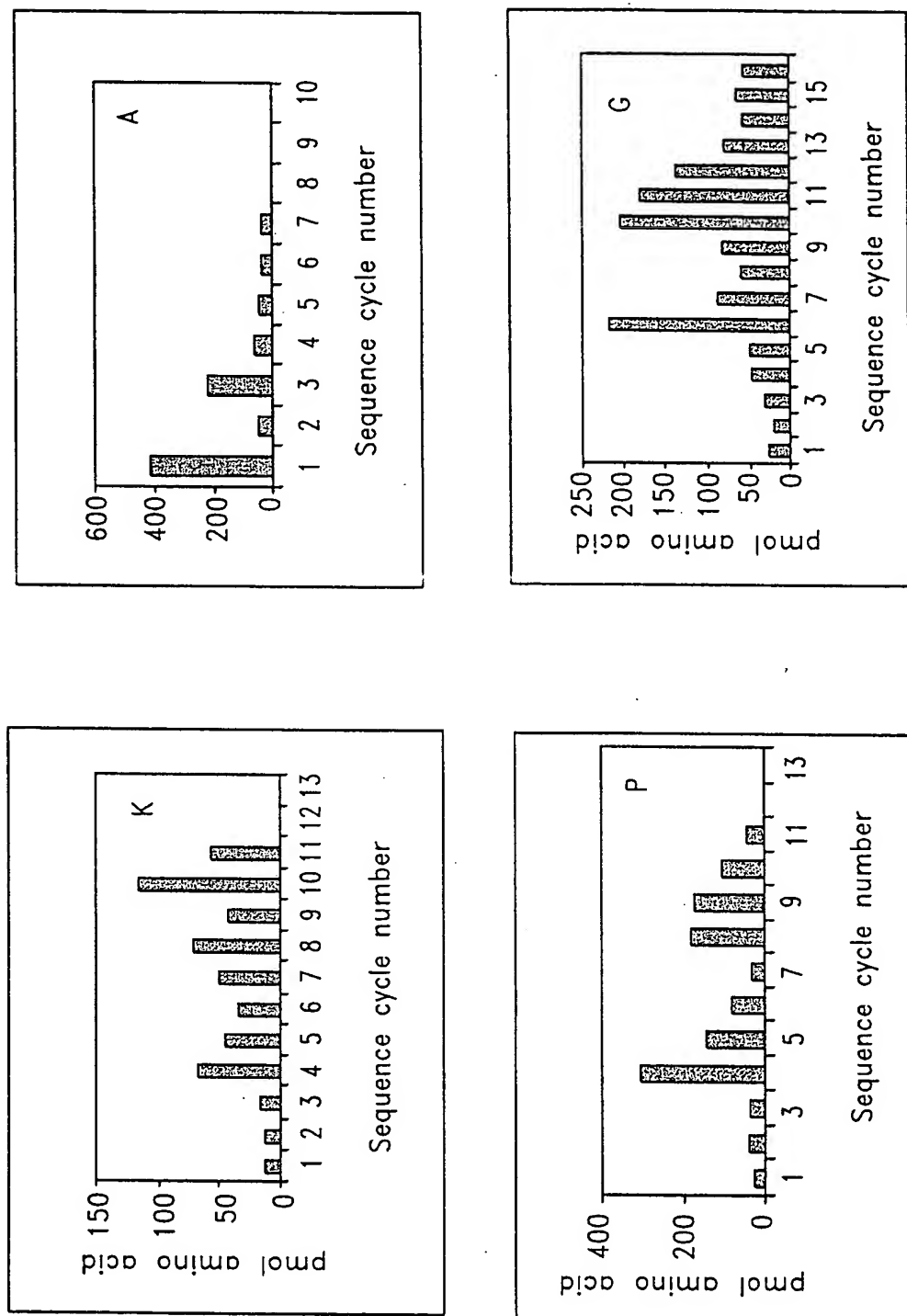
FIG. 7A

163-AF**S**P**Q**GMPEGLVYV**N**YAR**T**EDFEFKLERDM-192



Pool sequencing of PSMA_163-192 Digested for 60 min by proteasome

FIG. 7B



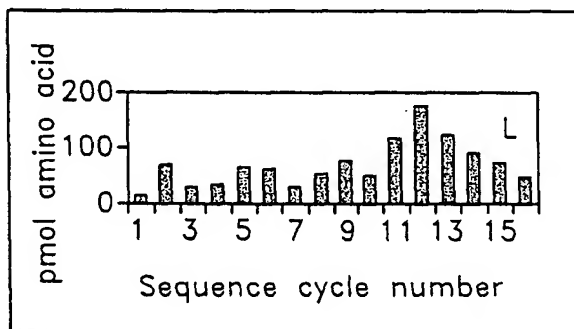
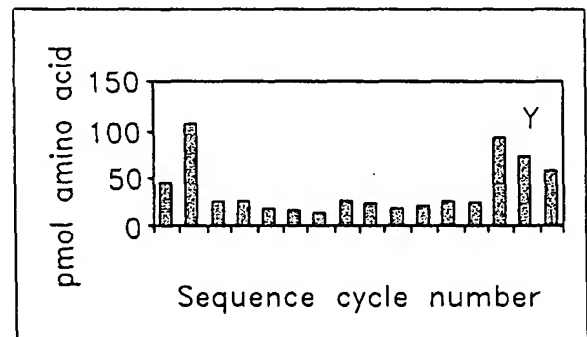
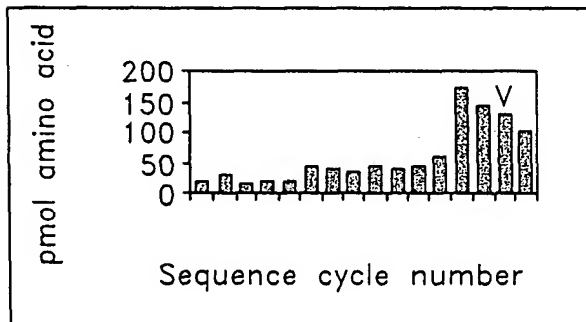
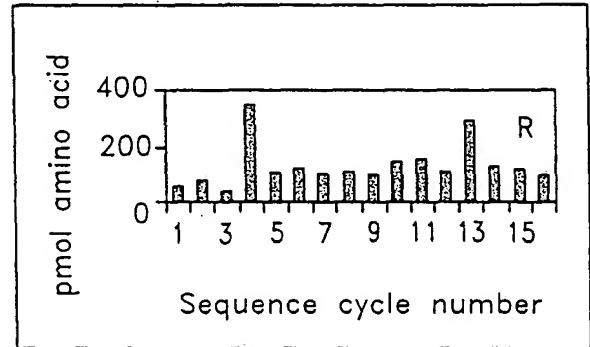
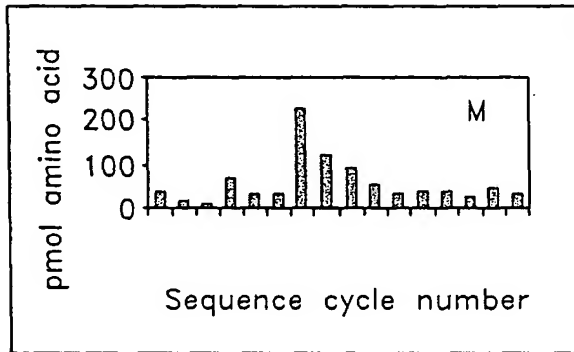
Pool sequencing of PSMA_163-192 Digested for 60 min by proteasome

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

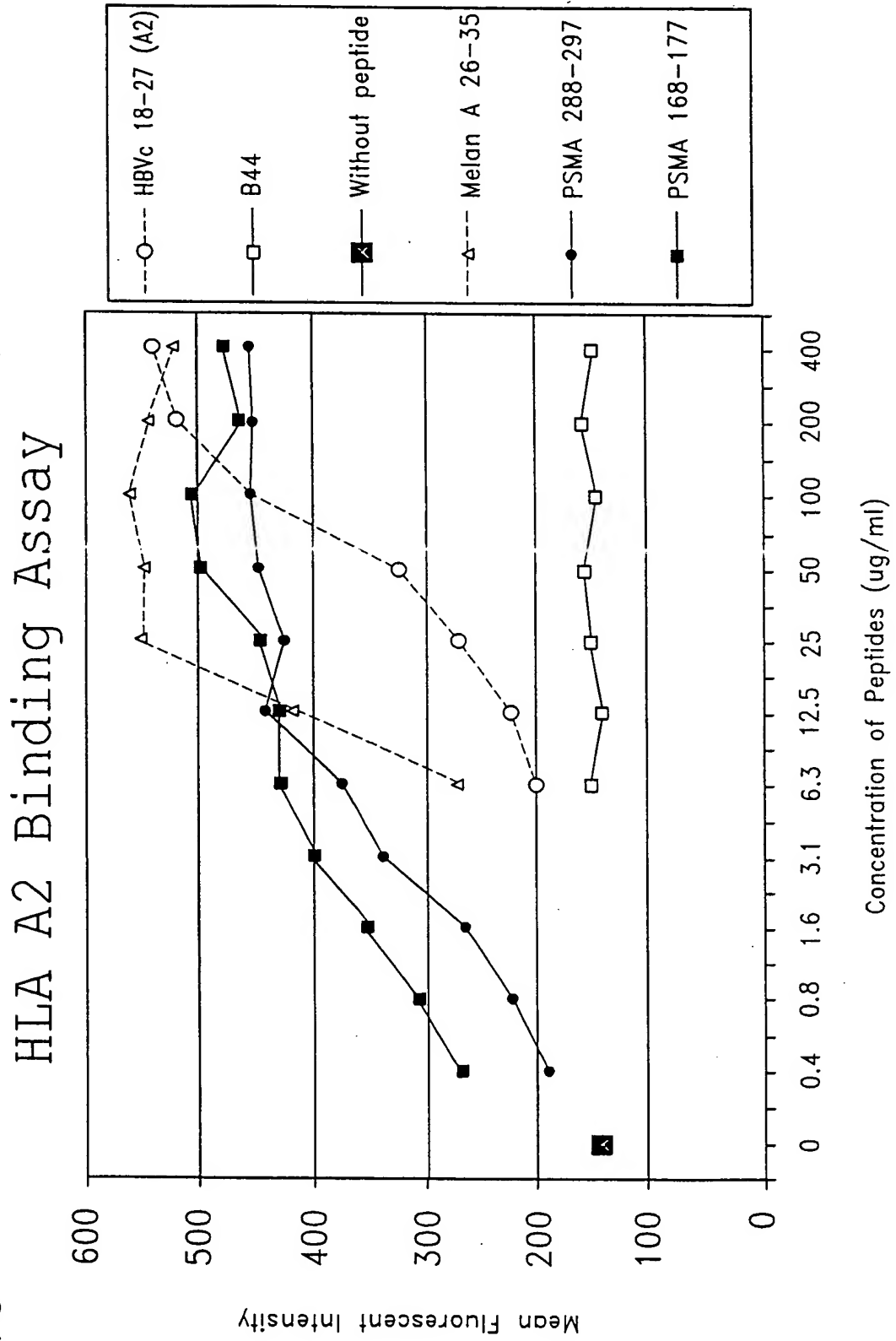
Atty Docket: MANNK.032A



Pool sequencing of PSMA_163-192 Digested for 60 min by proteasome

FIG. 7C

FIG. 8



Appl. No.: Unknown Atty Docket: MANNK.032A

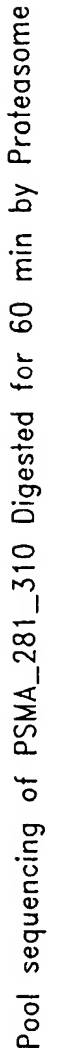
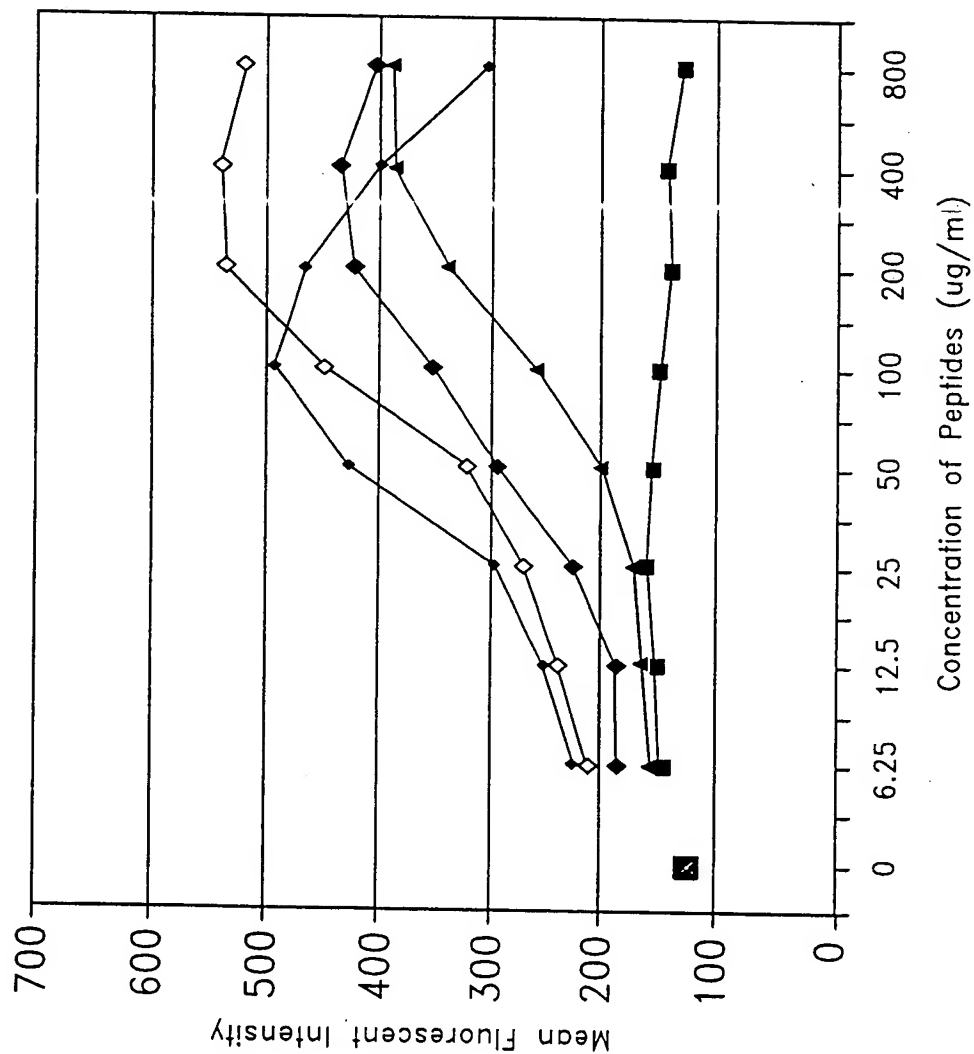


FIG. 10
Comparison of Peptides Binding
Affinity to HLA A2
by Binding Assay



Autologous DC Present A1 Peptide to CD8 T cell

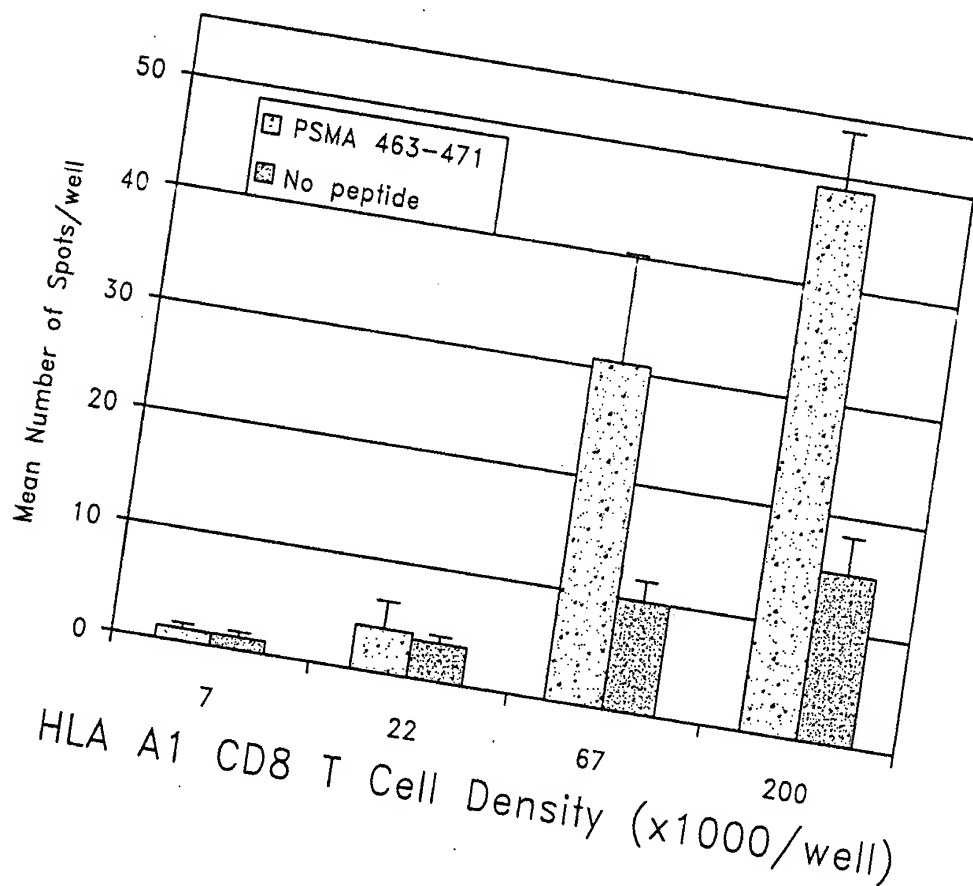


FIG. 11

Secretion of IFN γ Was Blocked by Anti-A1 Antibody

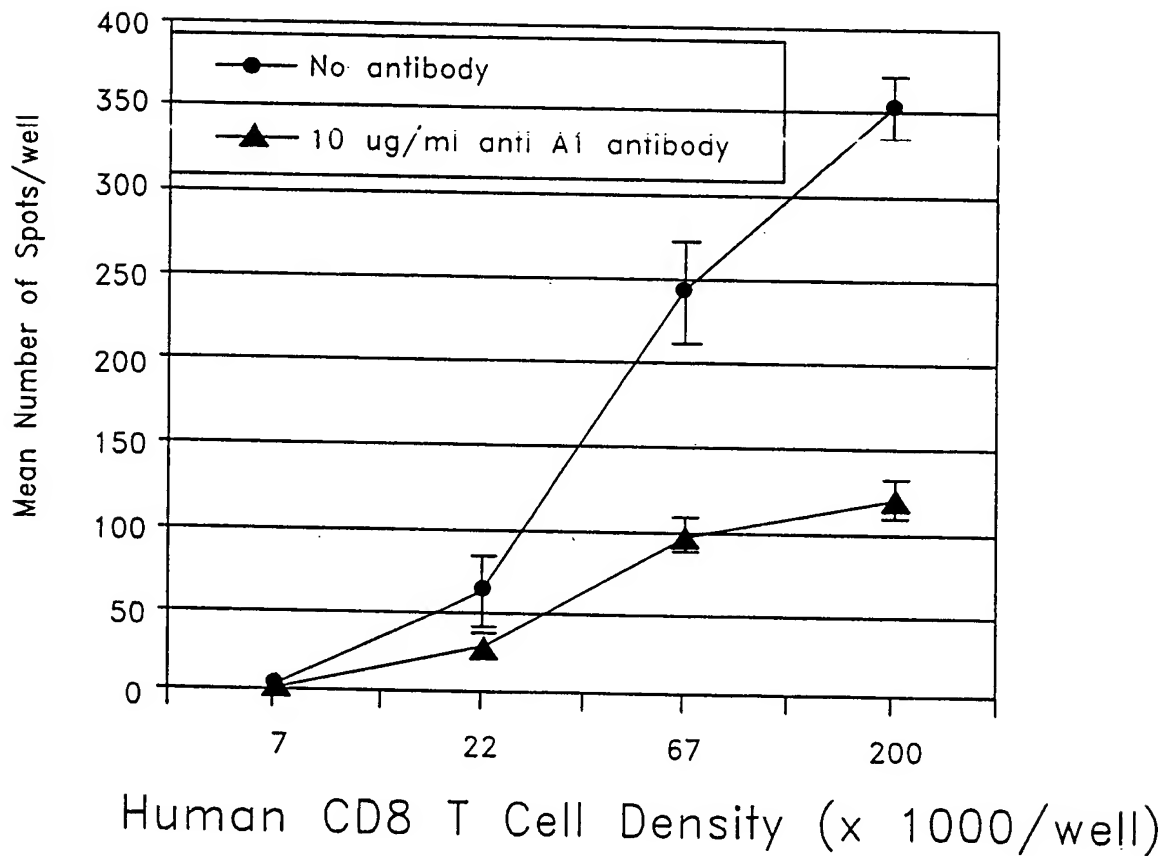


FIG. 12

FIG. 13

Comparison of Peptides Binding Affinity to HLA A2 by Binding Assay

EPITOPE SEQUENCES
Simard et al.
Appl. No.: Unknown Atty Docket: MANNK.032A

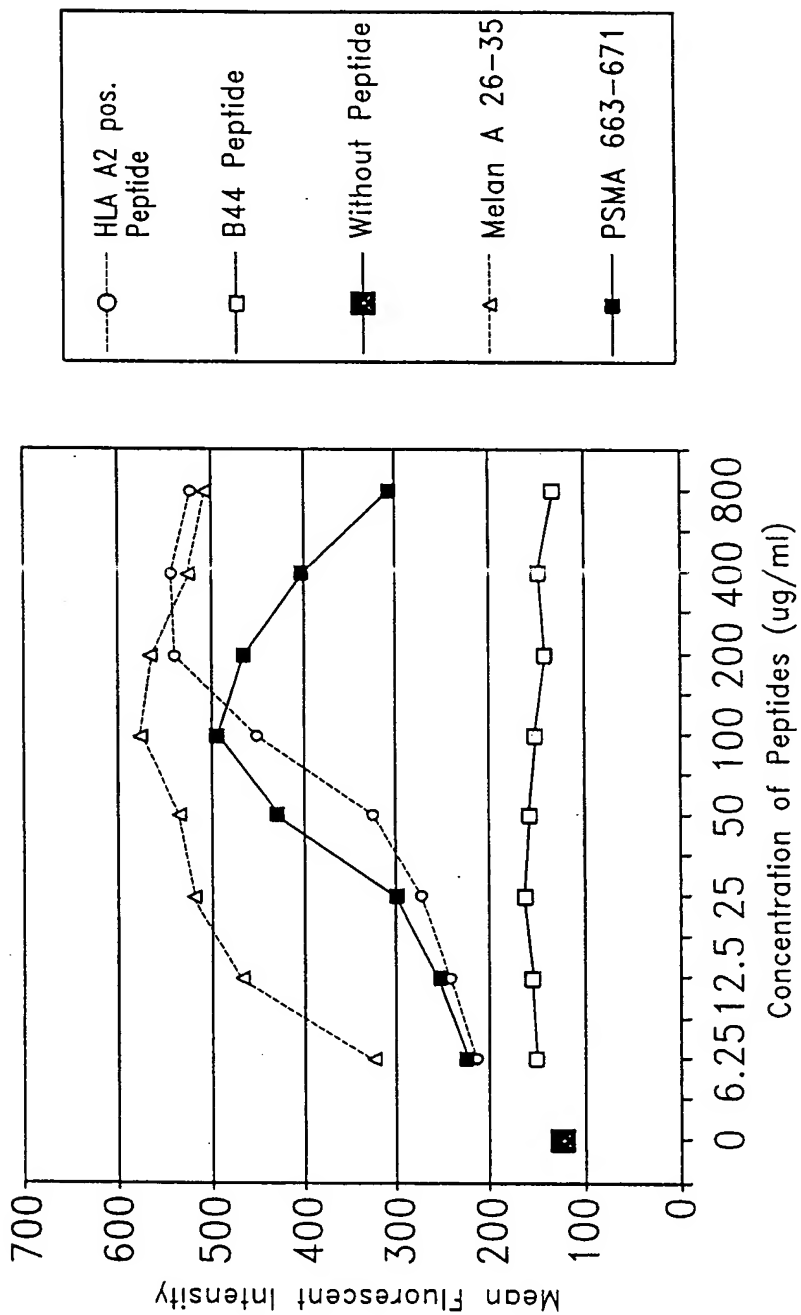
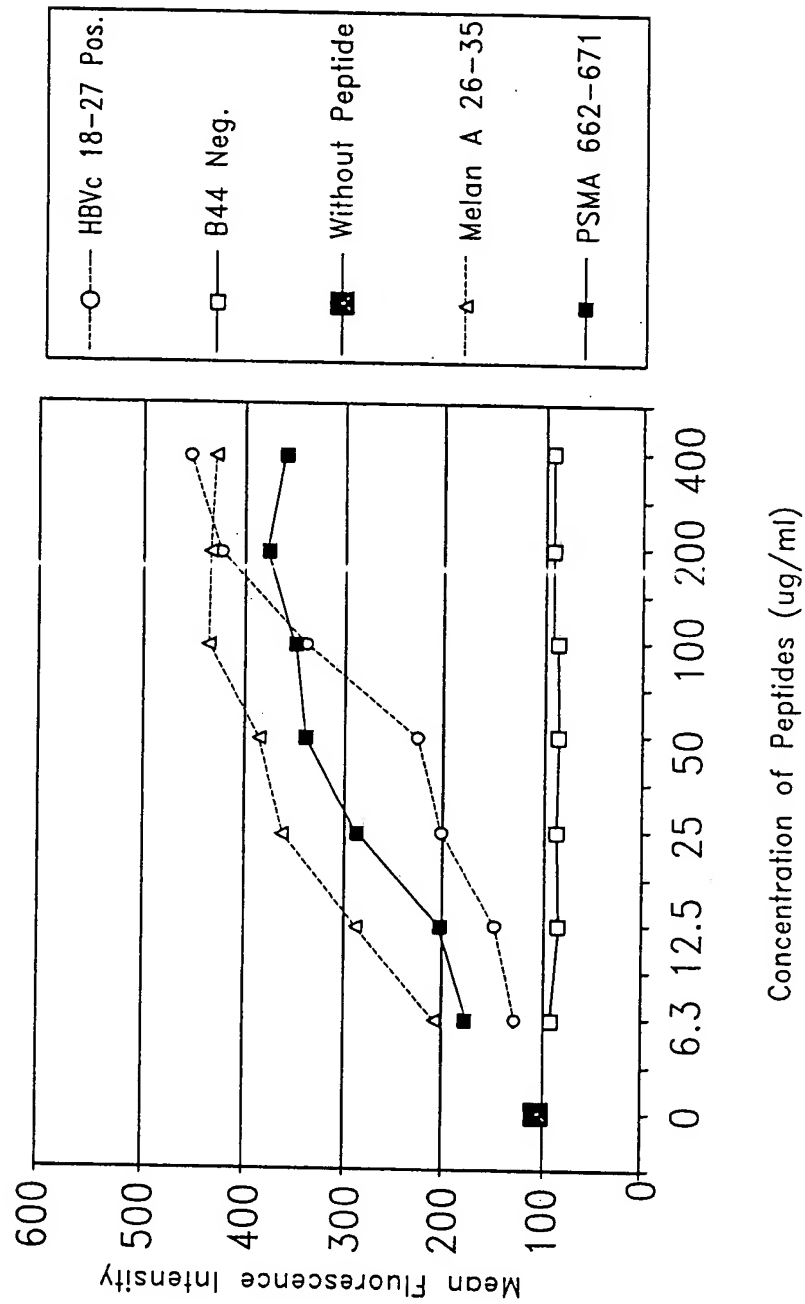
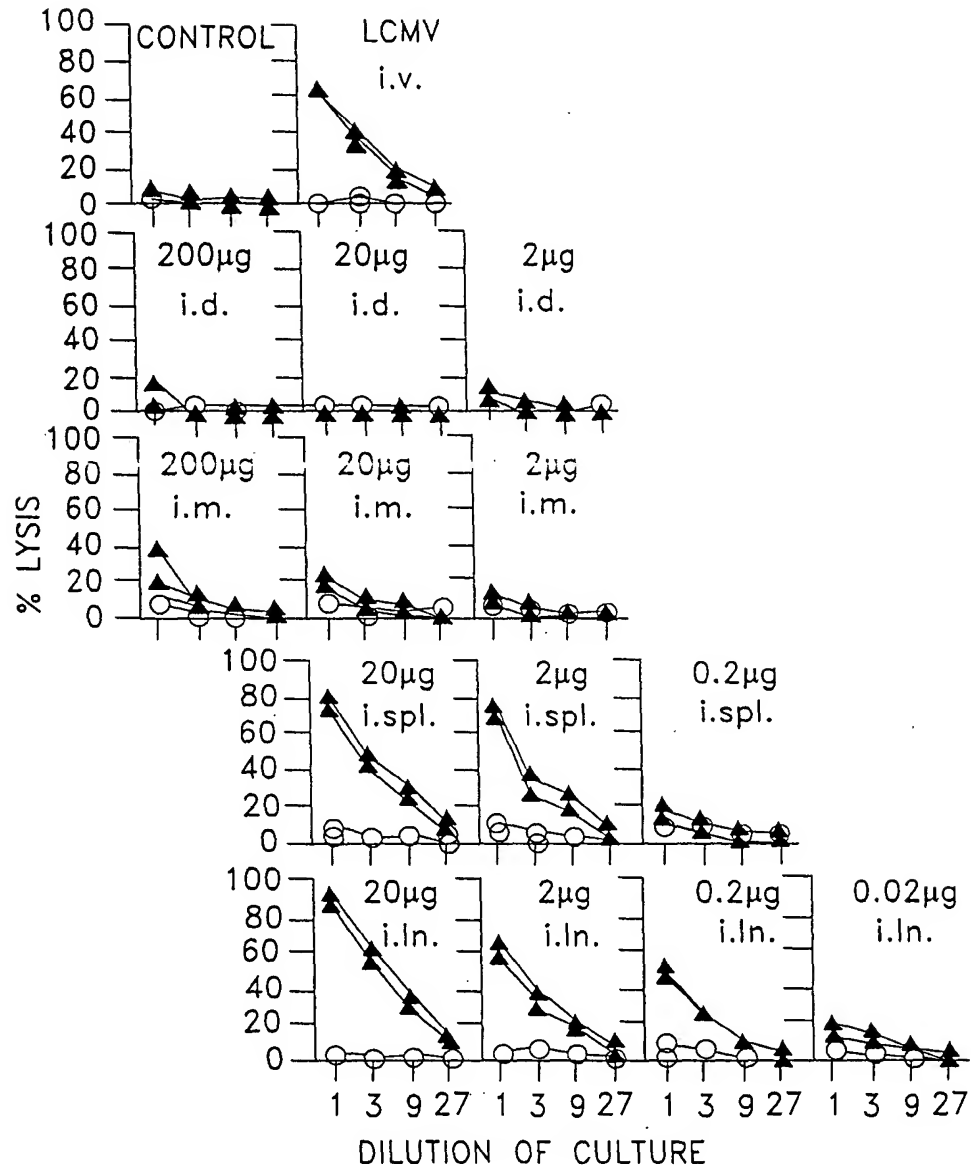


FIG. 14

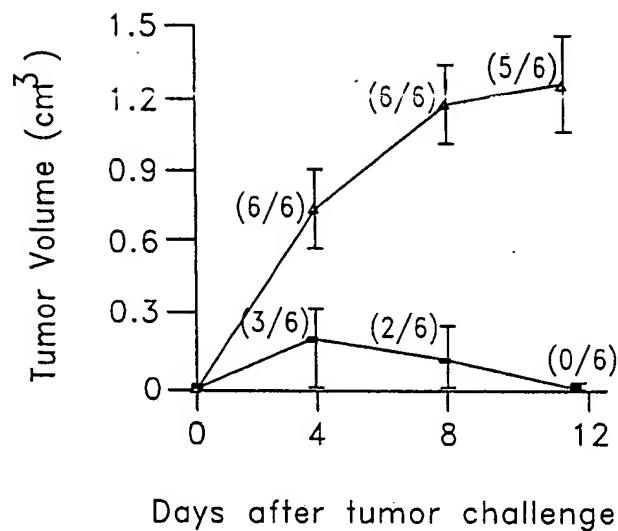
Comparison of Peptides Binding Affinity to HLA A2 by Binding Assay





Graphs show lysis of unpulsed EL4 cells (open circles) and EL4 cells pulsed with gp33 peptide (solid triangles). Symbols represent individual mice and one of three similar experiments is shown.

FIG. 15



Mean tumor volumes \pm 1SD are shown for mice immunized with pEFGPL33A DNA (solid circles) or control pEGFP-N3 DNA (open triangles). Numbers in brackets indicate number of mice with tumors/total number of mice in group. One of two similar experiments is shown.

FIG. 16

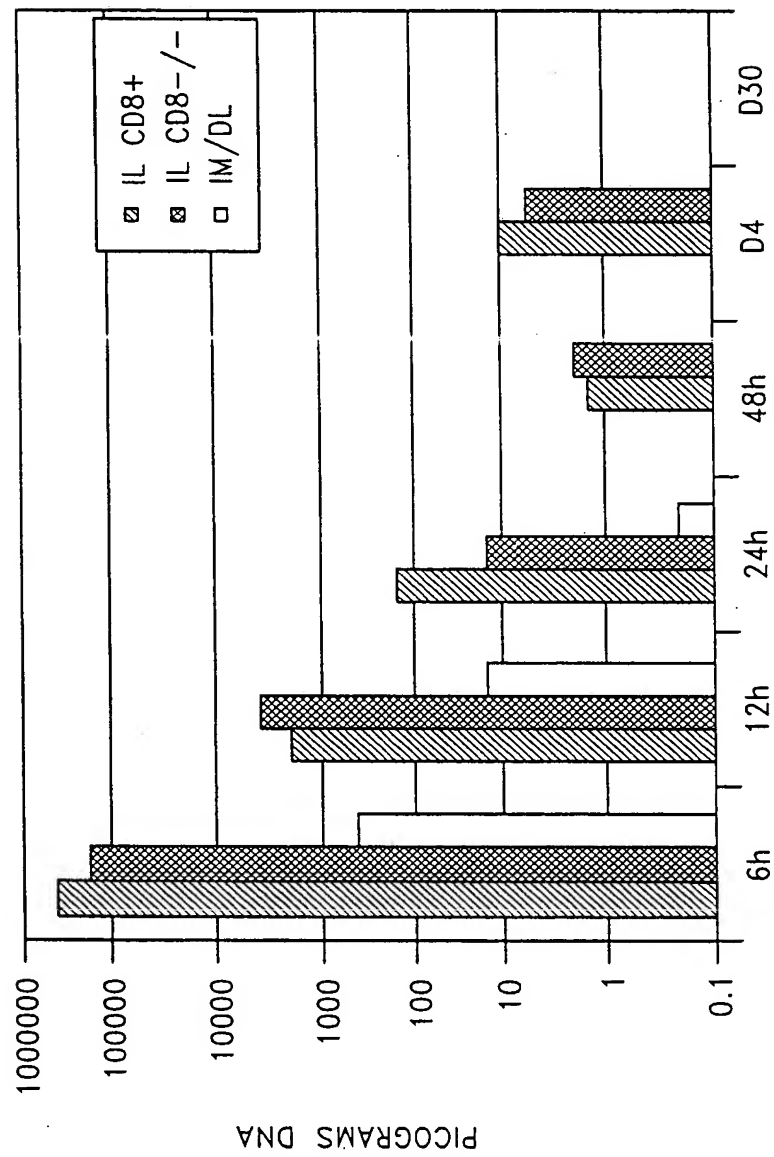


FIG. 17

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

Tyrosinase (171-203)

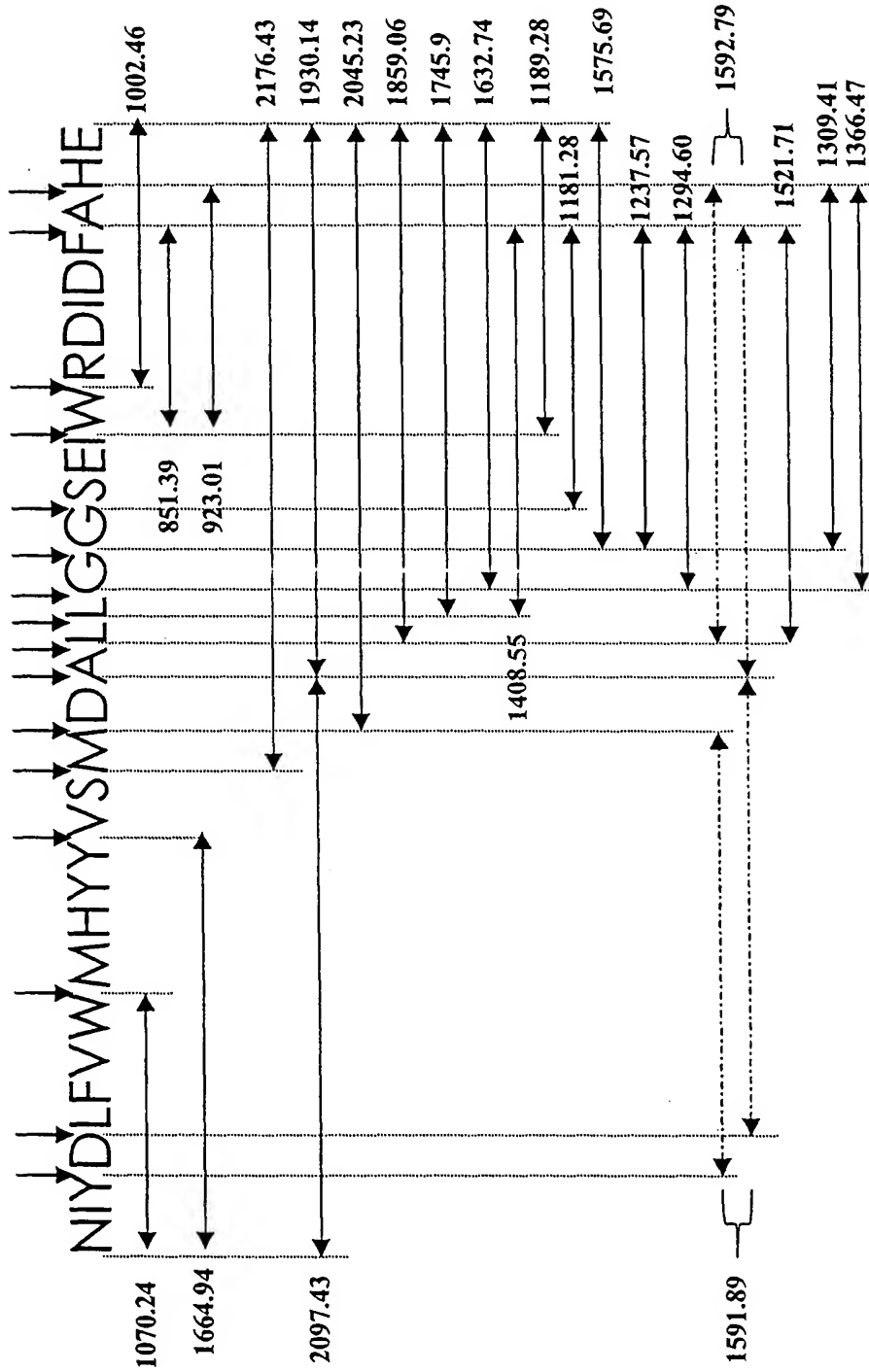


Figure 18

Tyr (401-427)

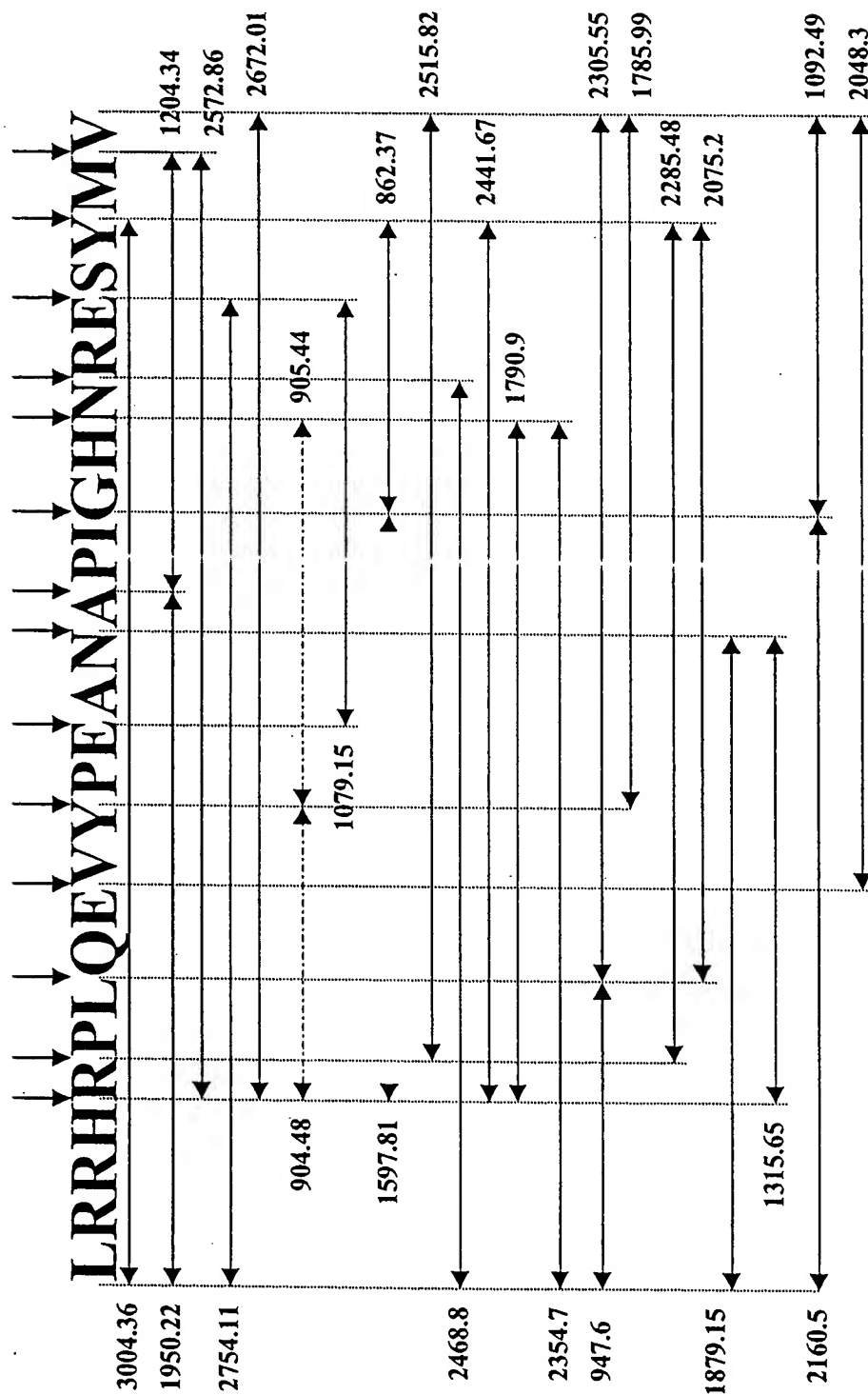


Figure 19

Tyrosinase (415-449)

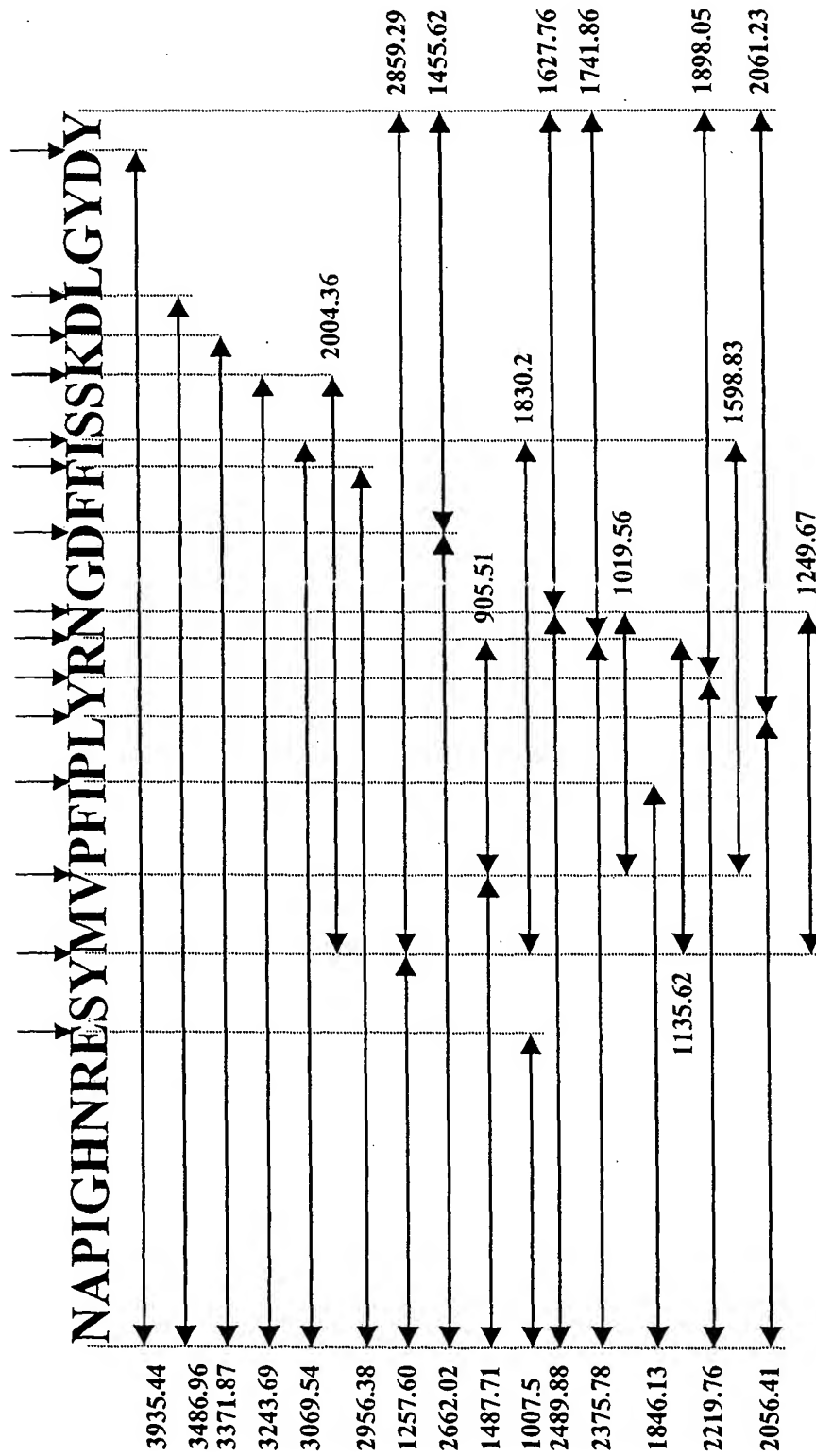


Figure 20

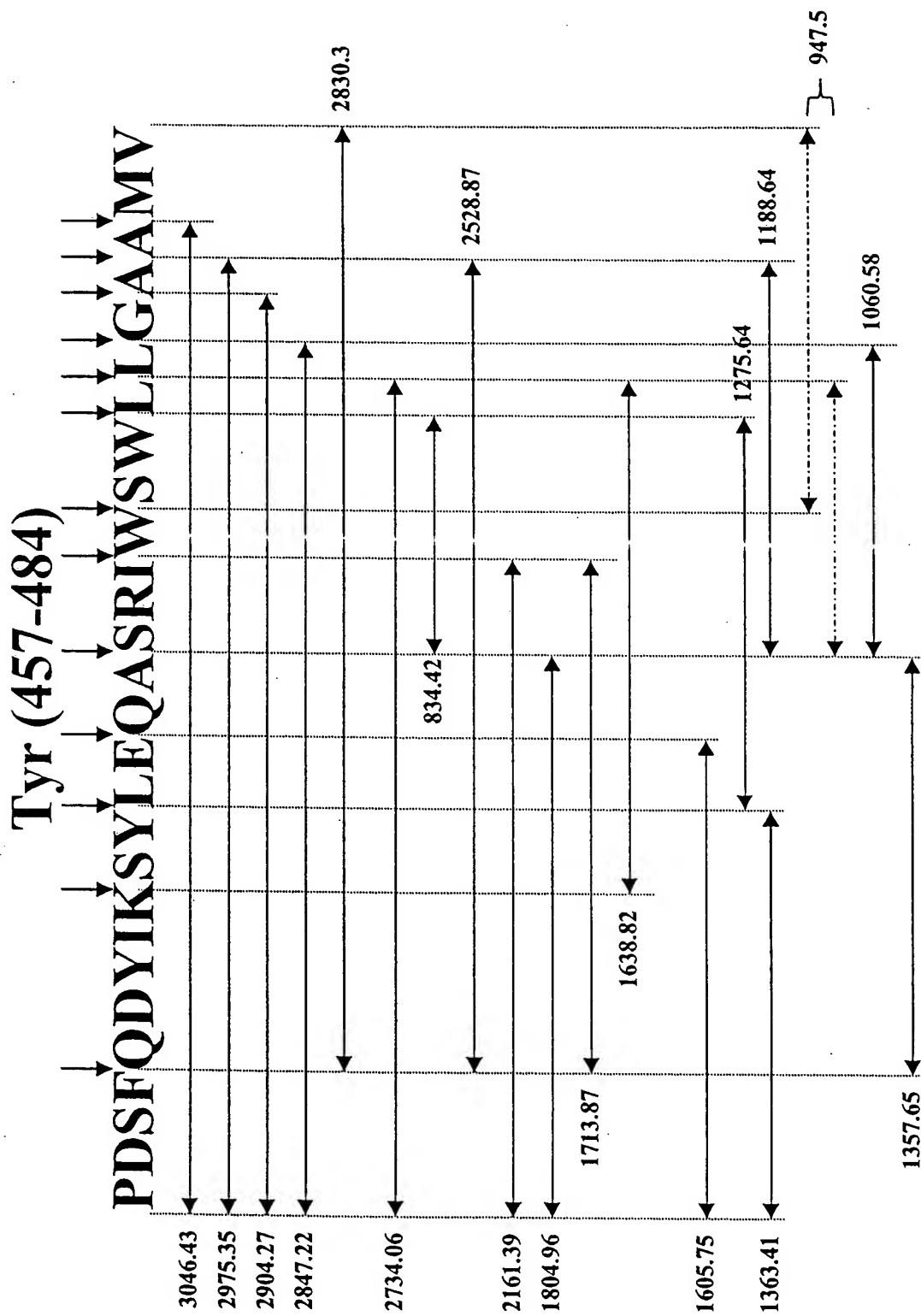


Figure 21

CEA 92-118

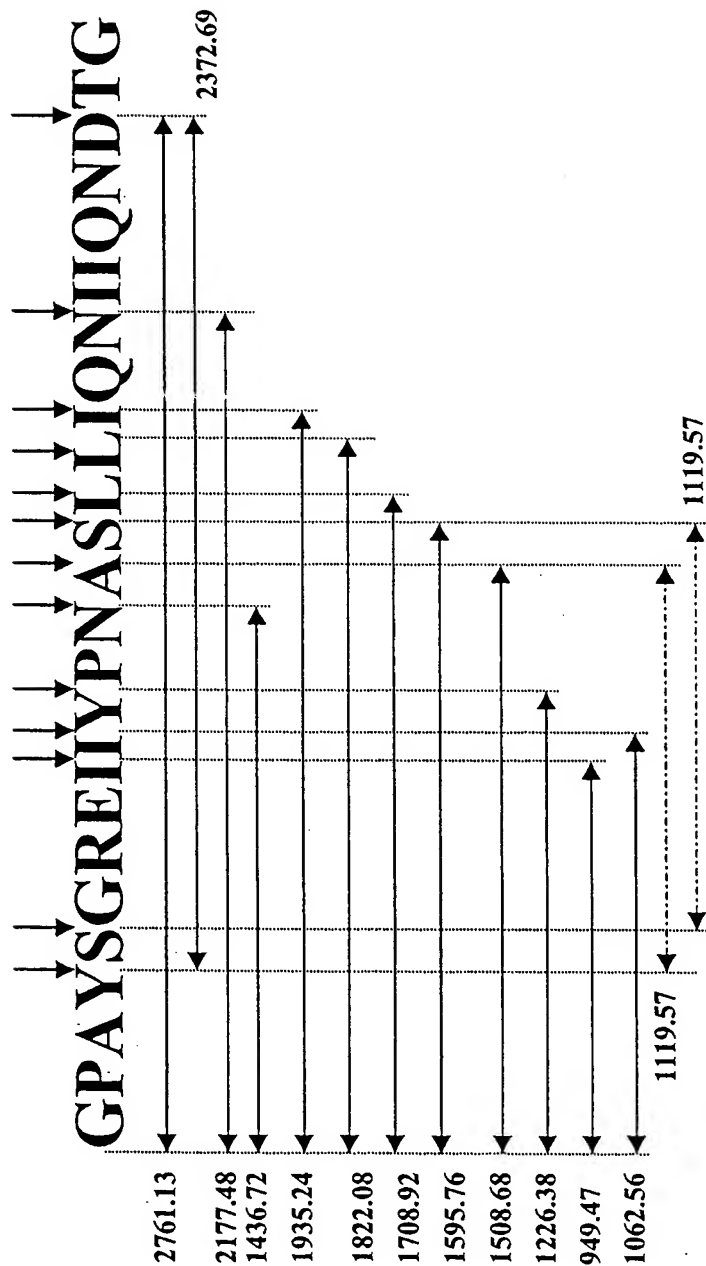


Figure 22

CEA 131-159

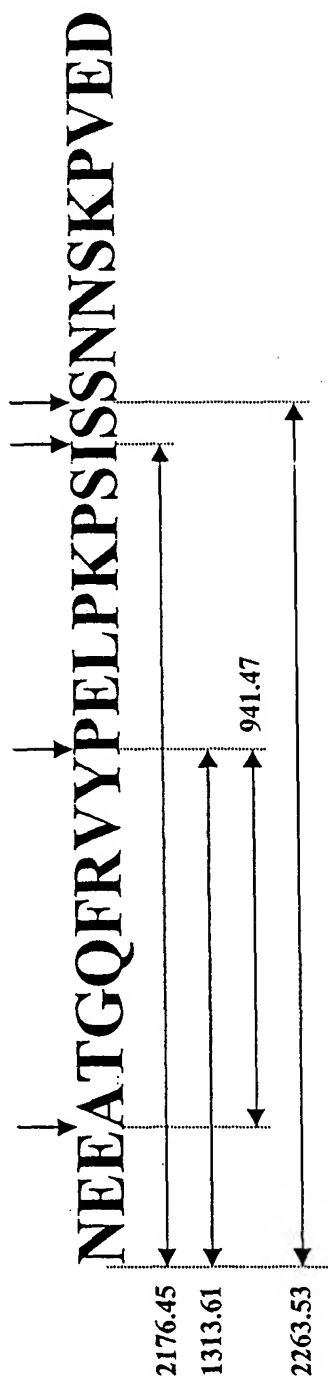


Figure 23

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

CEA 225-251

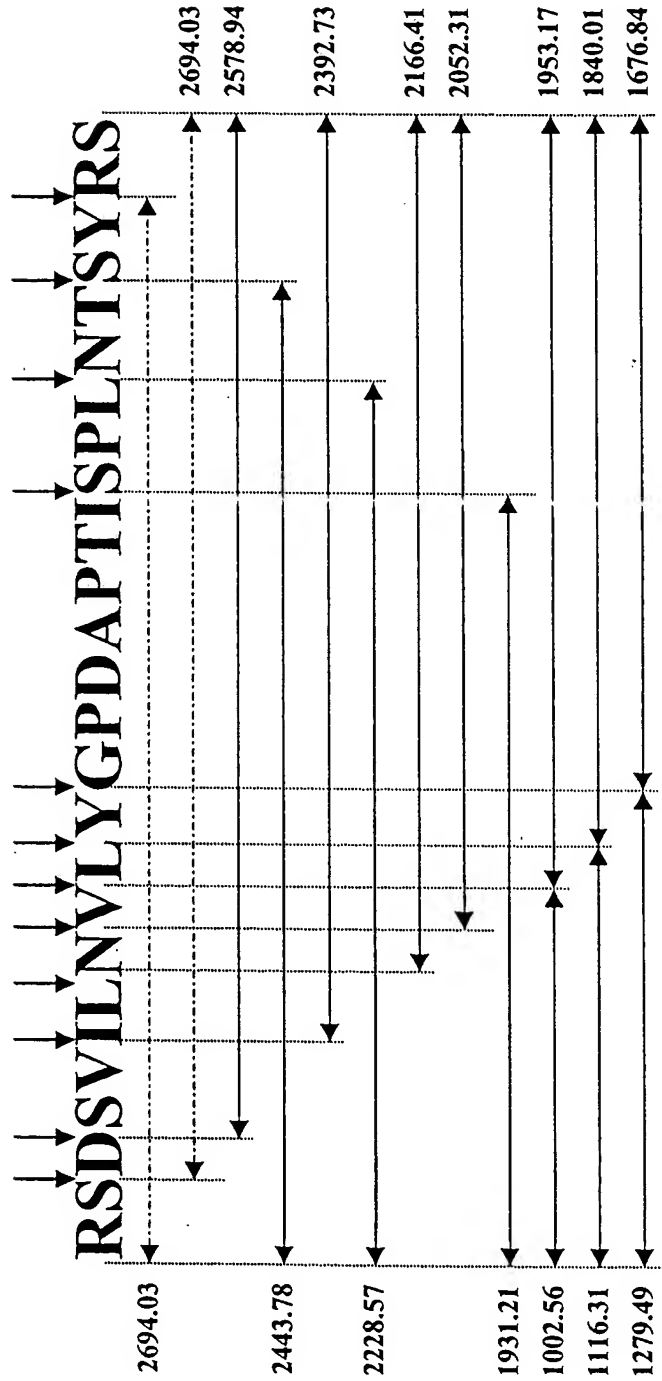


Figure 24

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

CEA 239-270

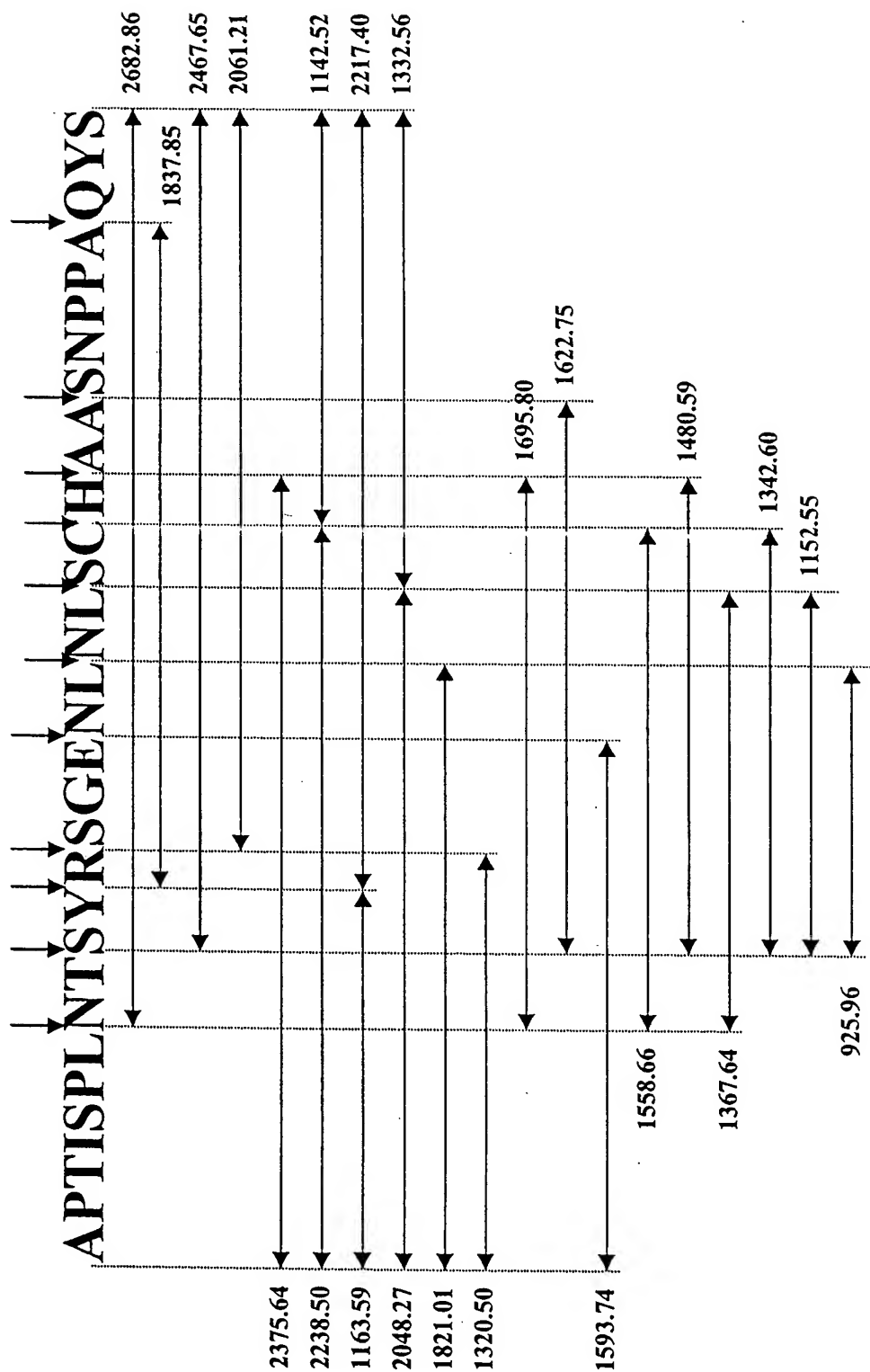


Figure 25

CEA 259-286

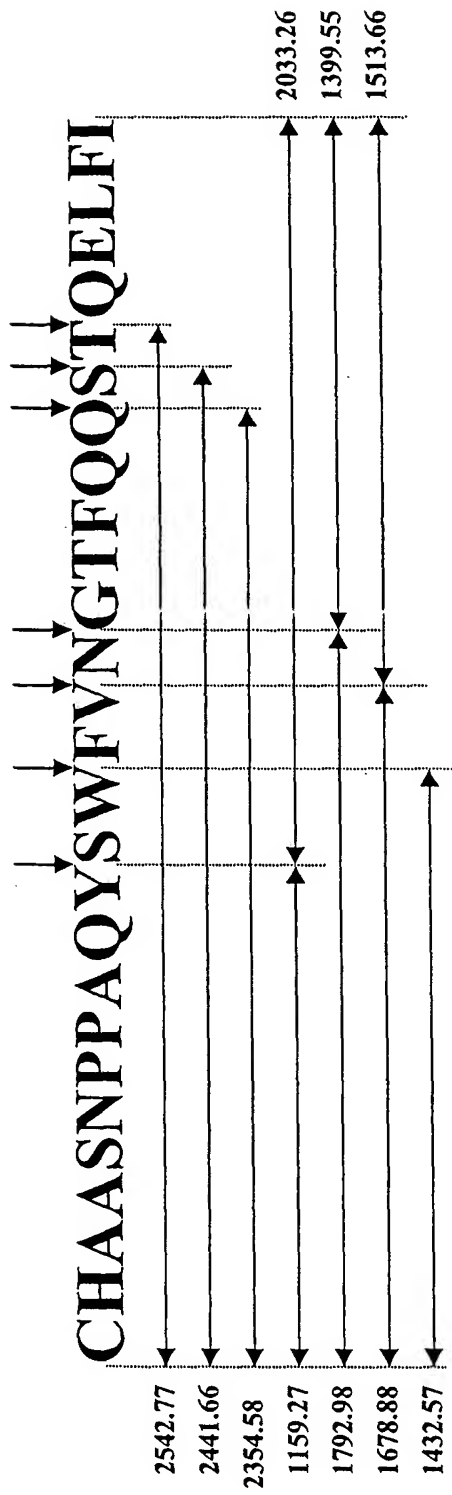


Figure 26

CEA 309-336

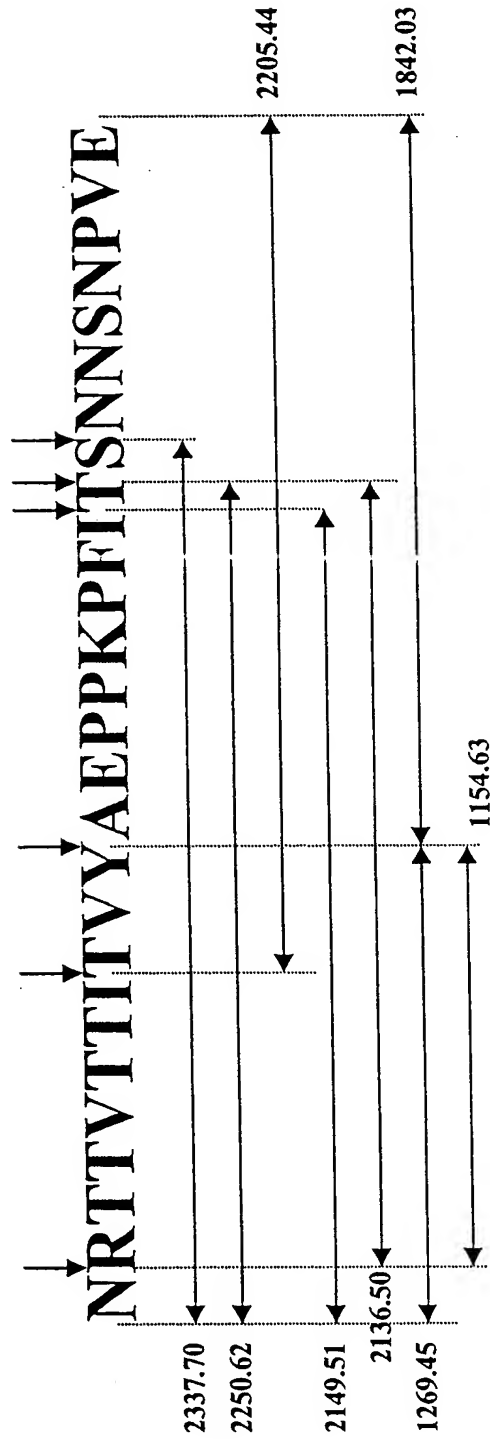


Figure 27

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

CEA 381-408

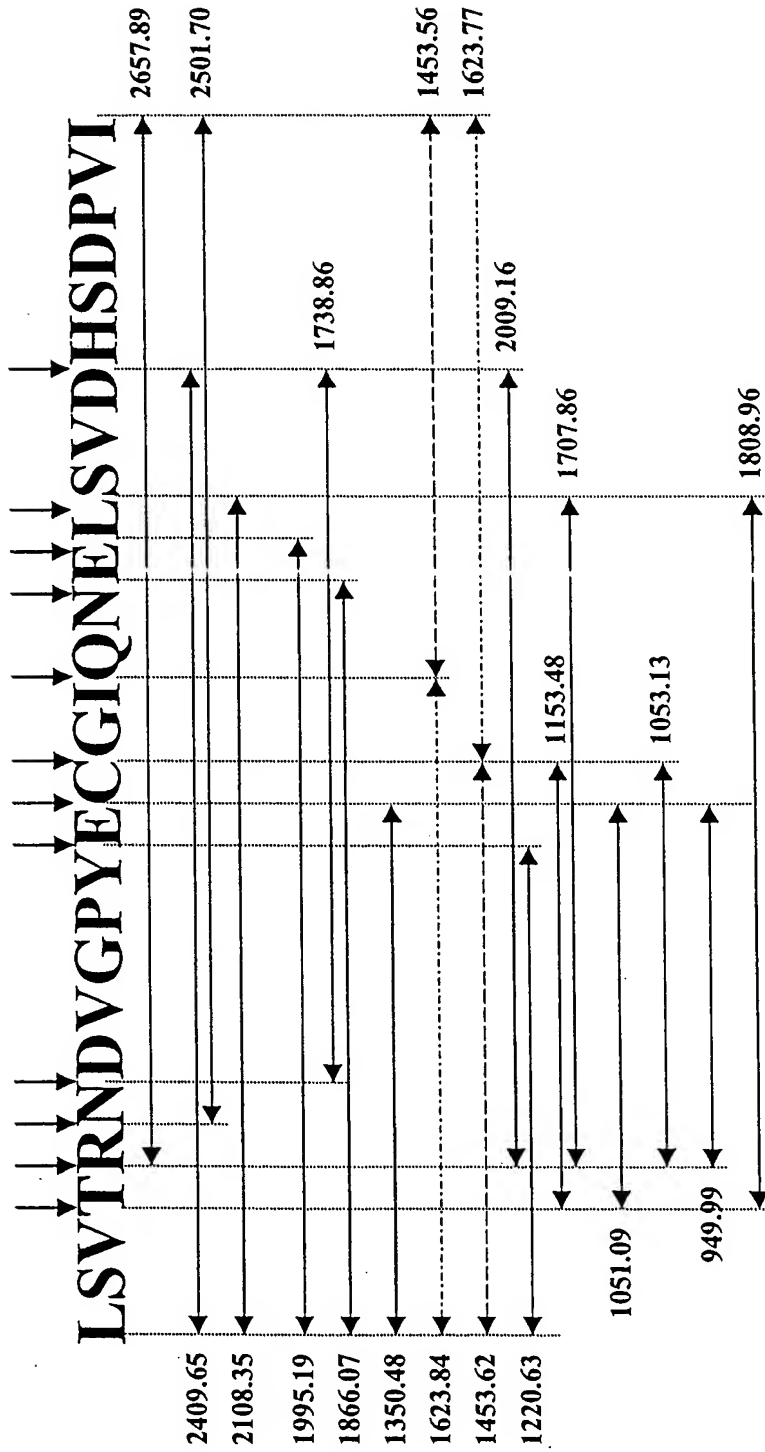


Figure 28

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

CEA 403-429

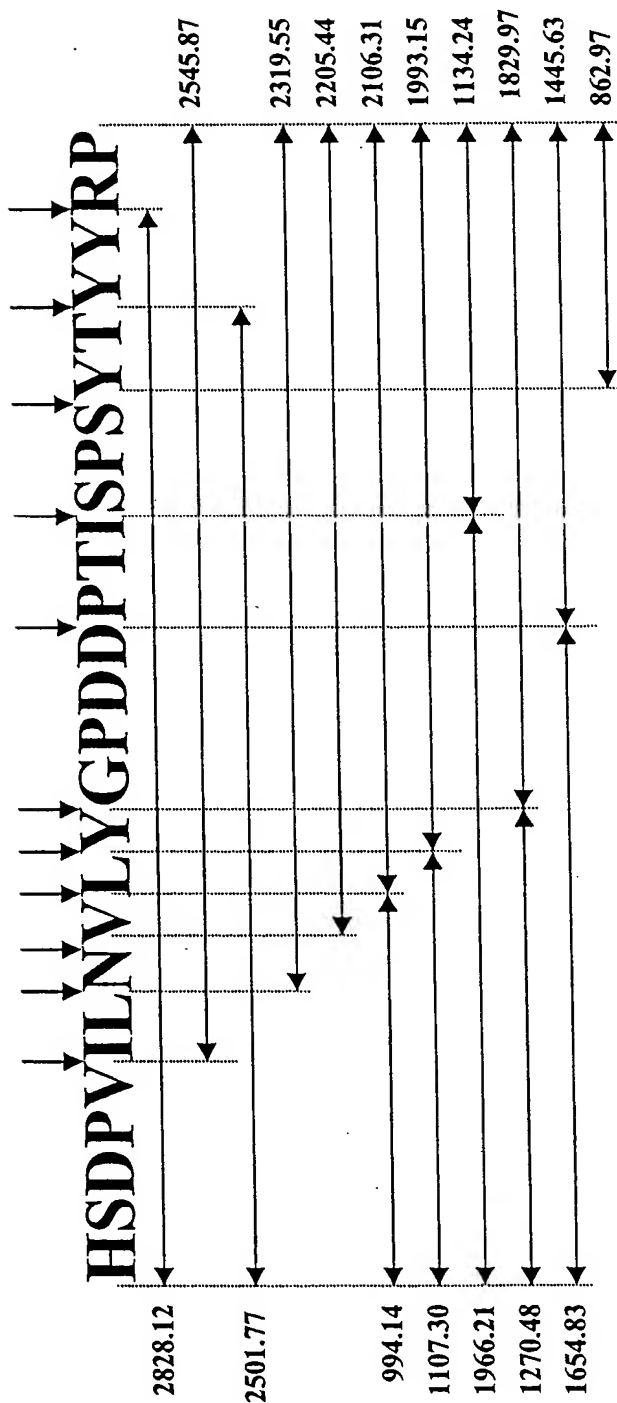


Figure 29

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

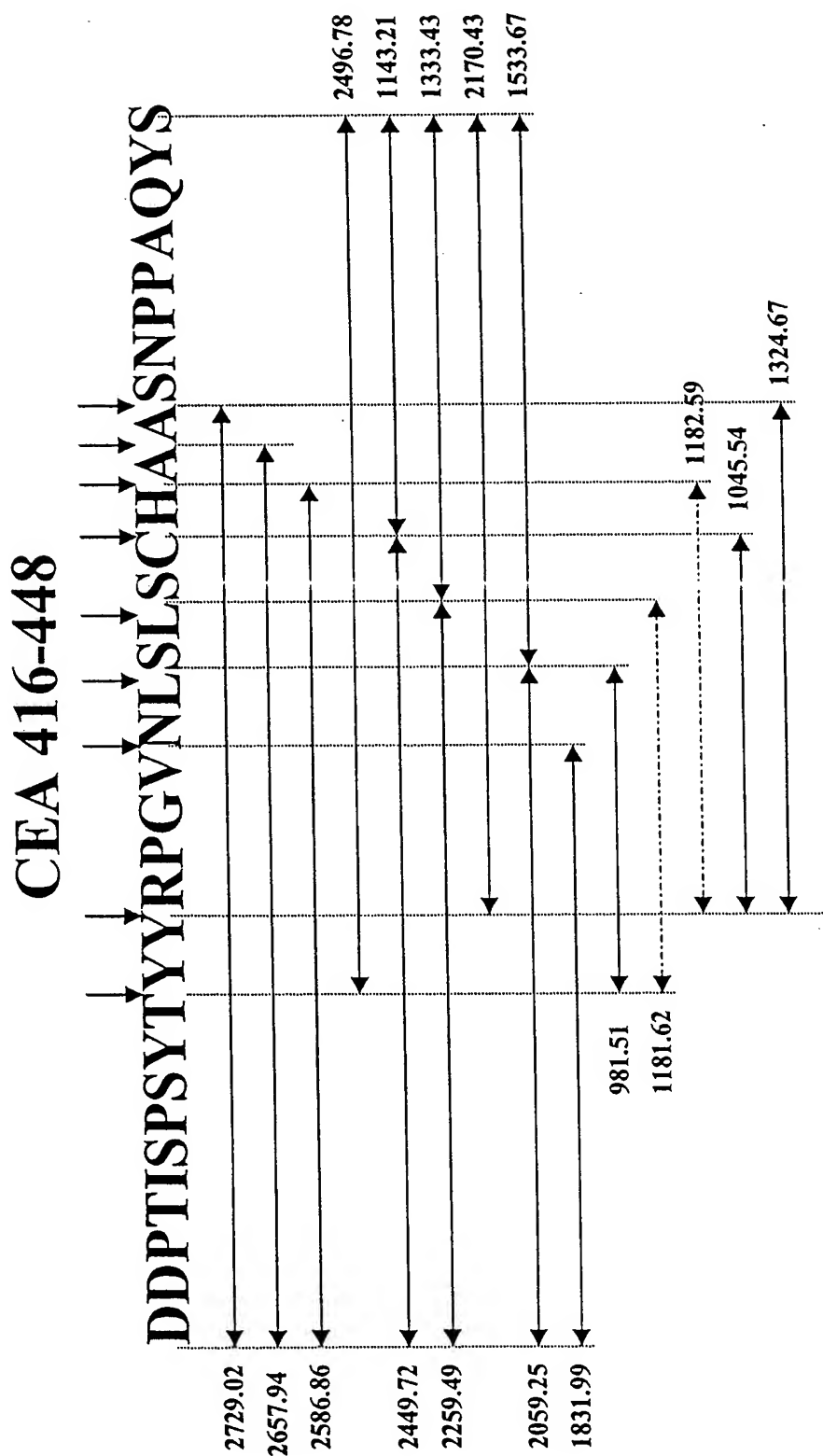


Figure 30

CEA 437-464

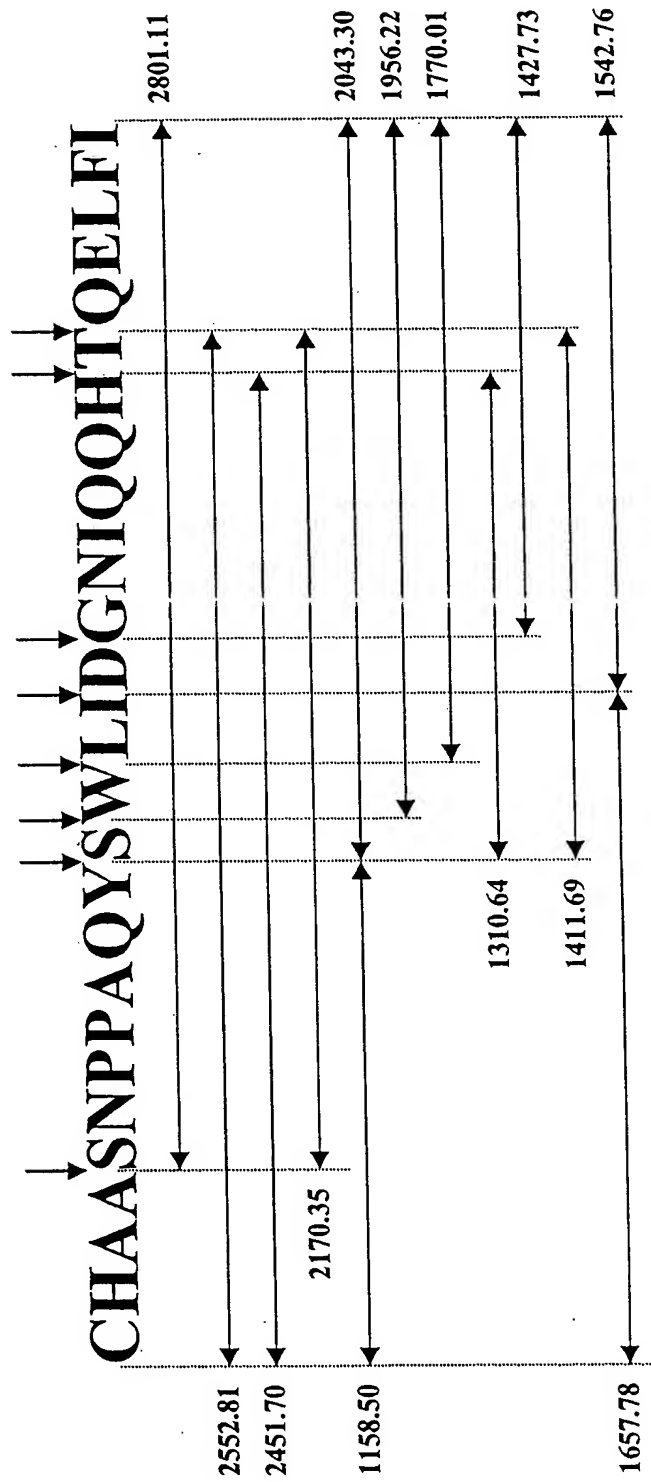


Figure 31

CEA 581-607

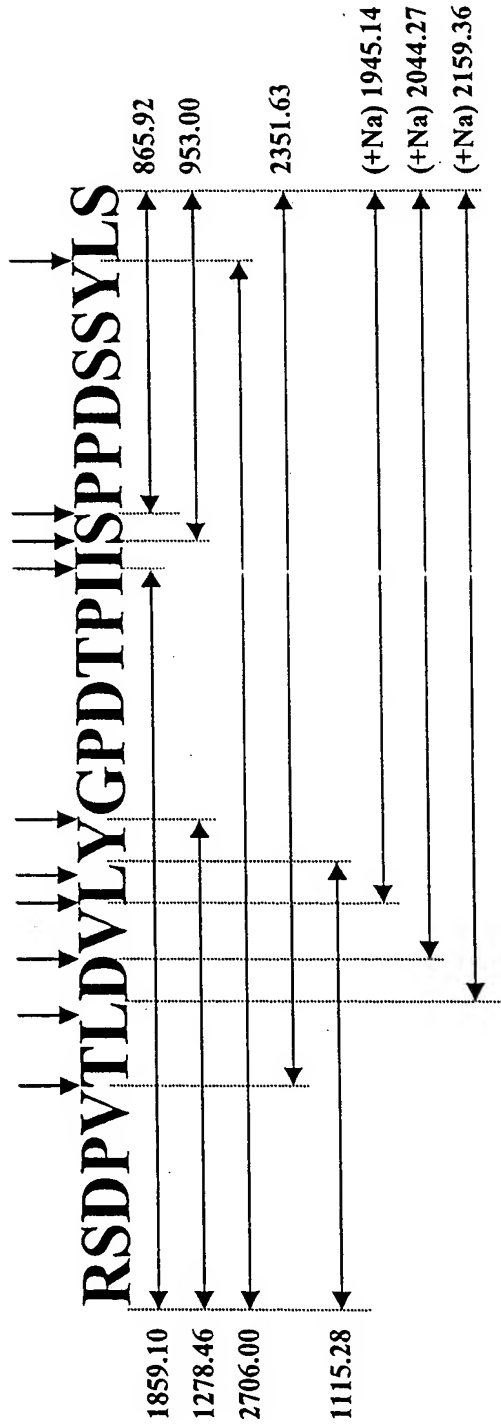


Figure 32

CEA 595-622

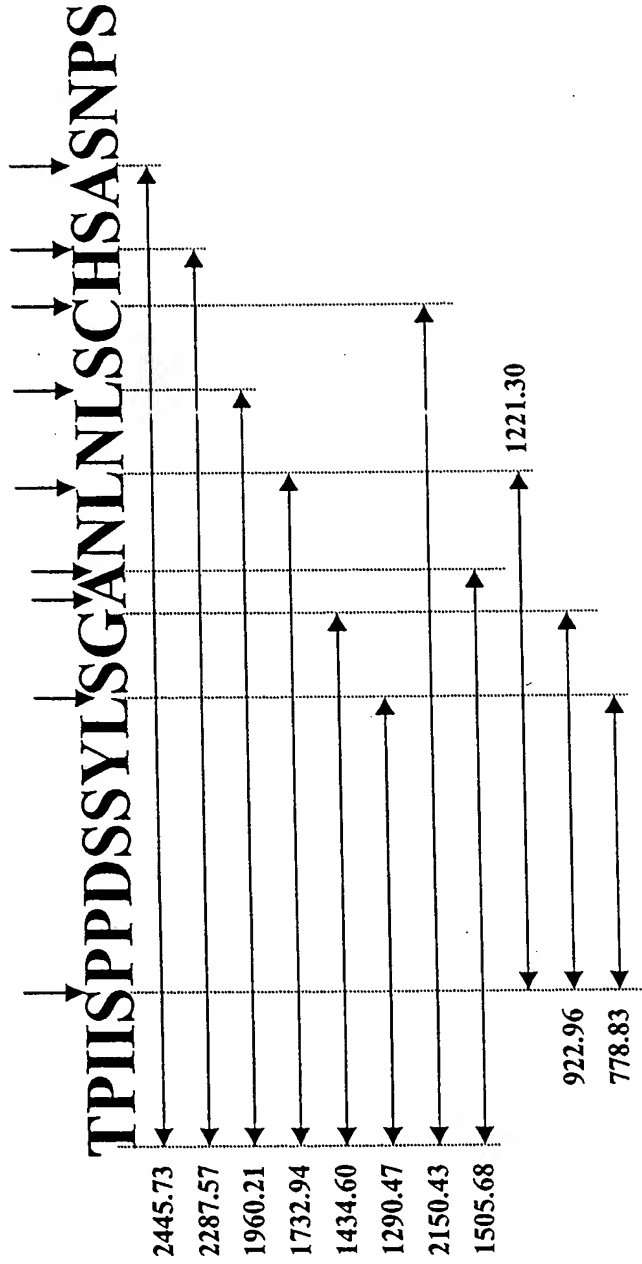


Figure 33

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

CEA 615-641

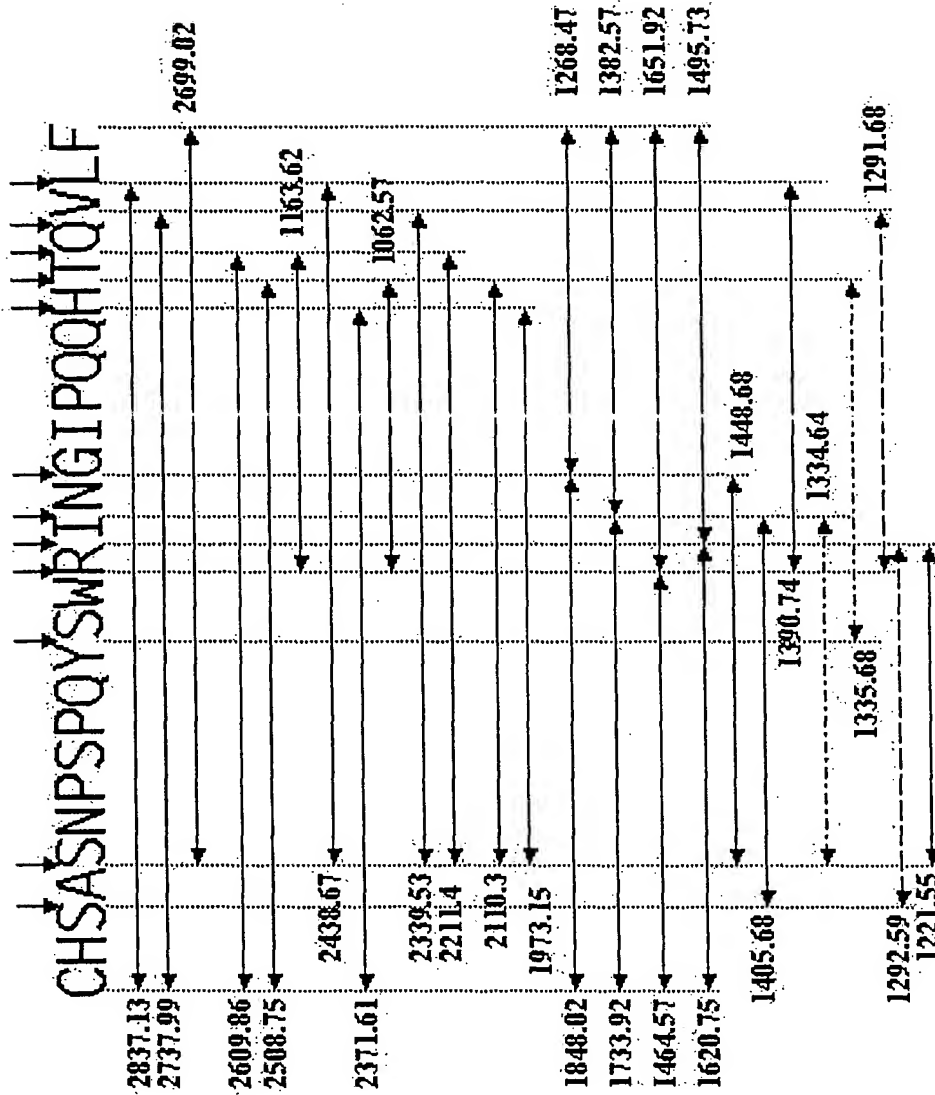


Figure 34

CEA 643-677

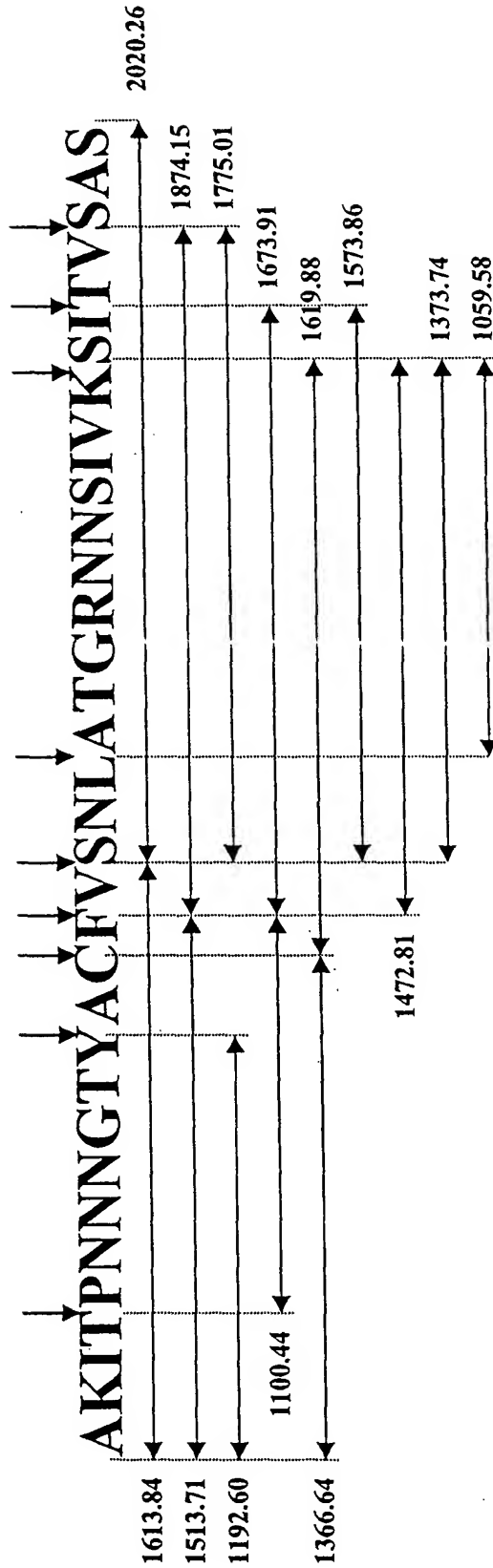


Figure 35

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

GAGE-1 (6-32) 30 min

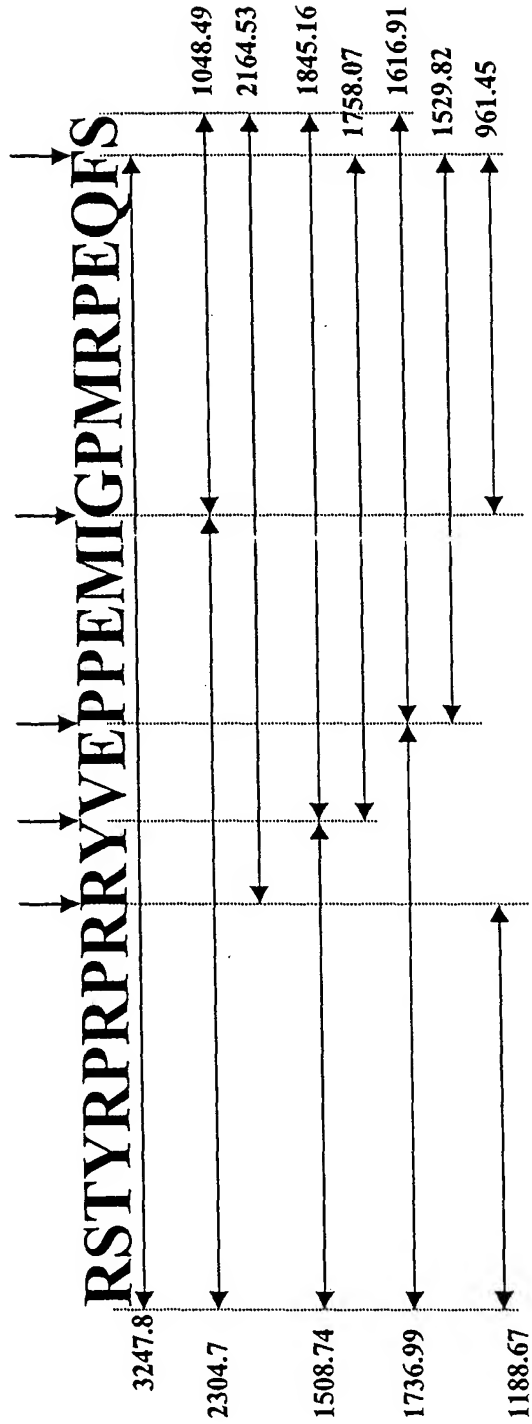


Figure 36

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

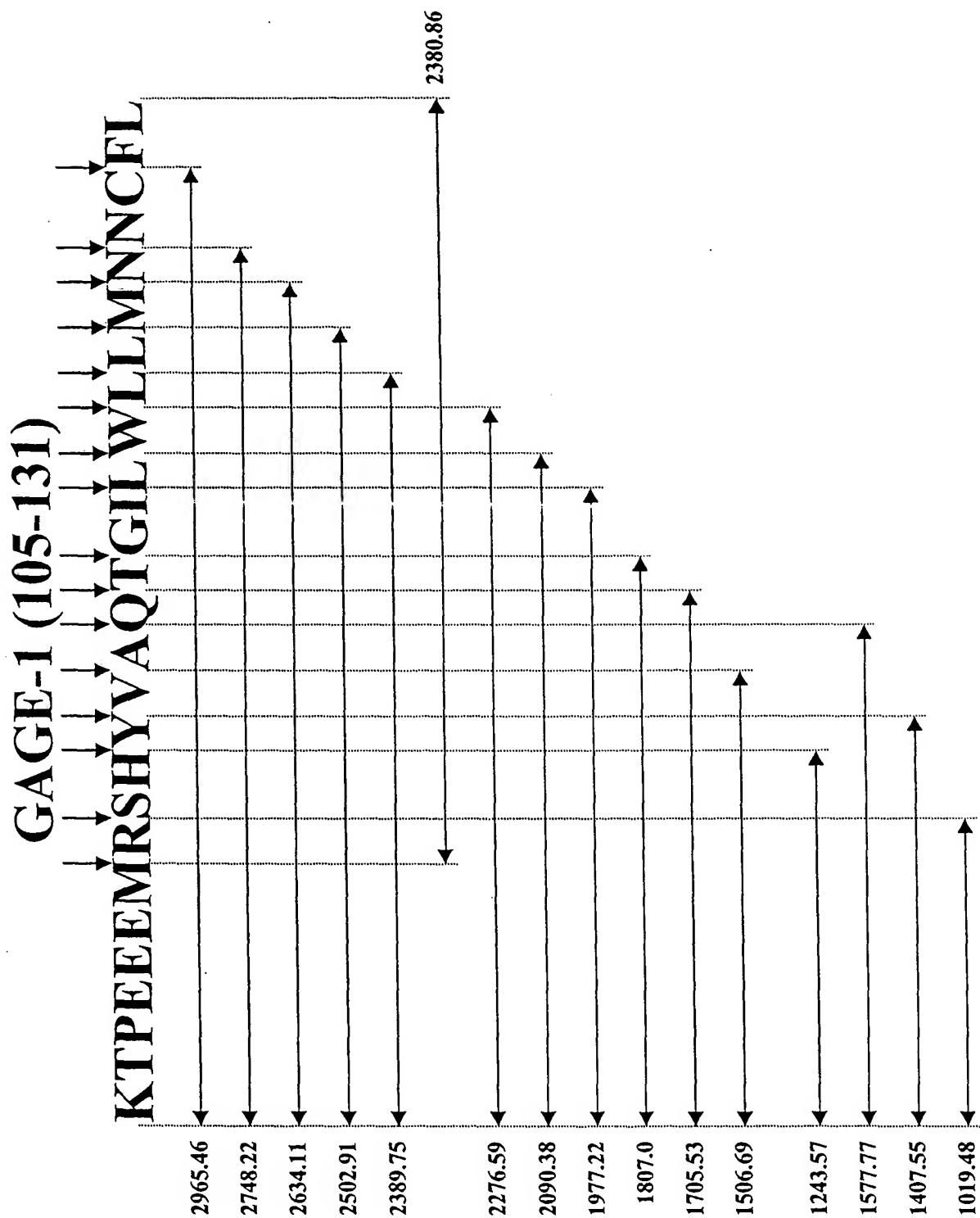


Figure 37

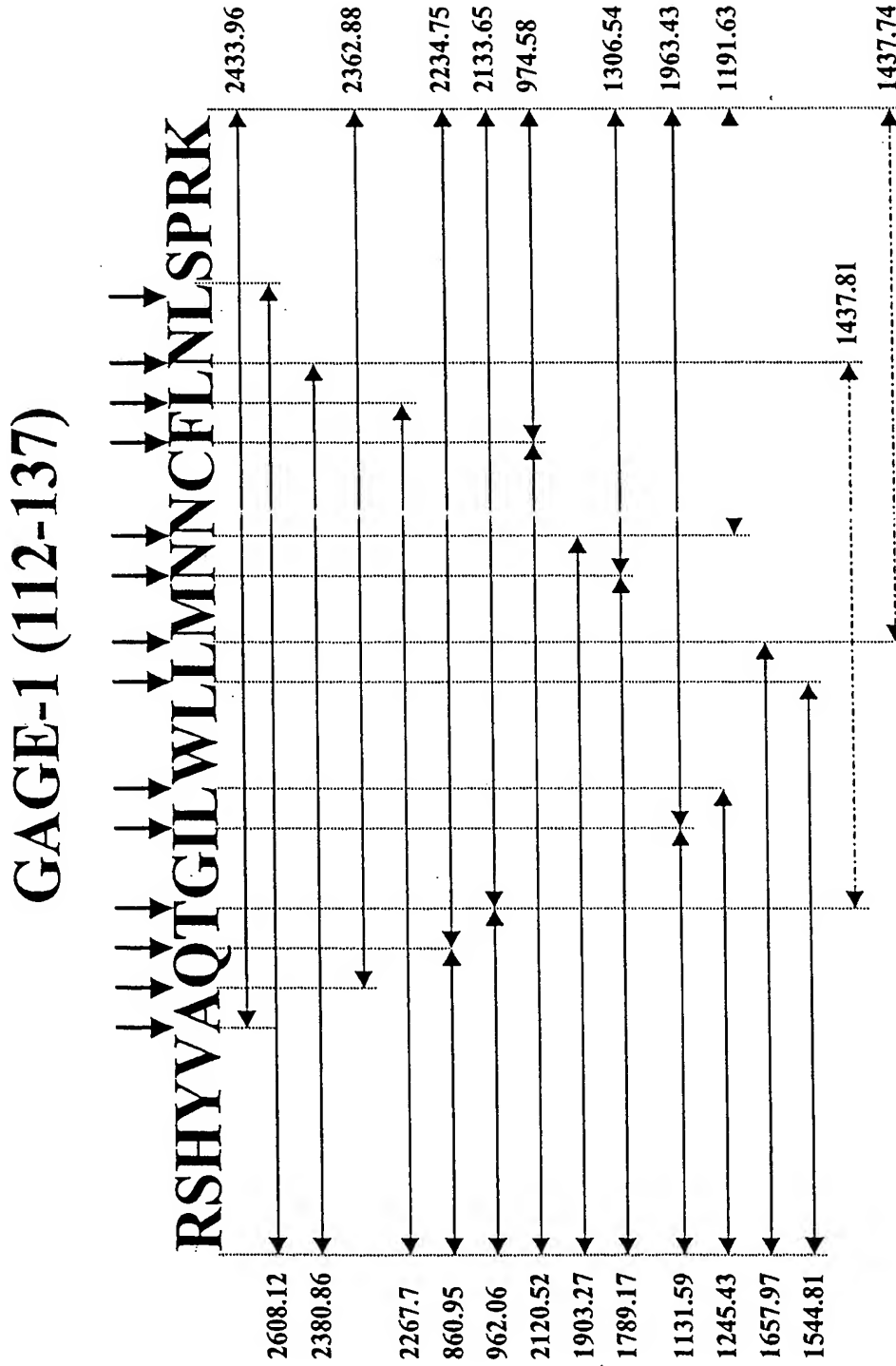


Figure 38

MAGE-1 (51-77)

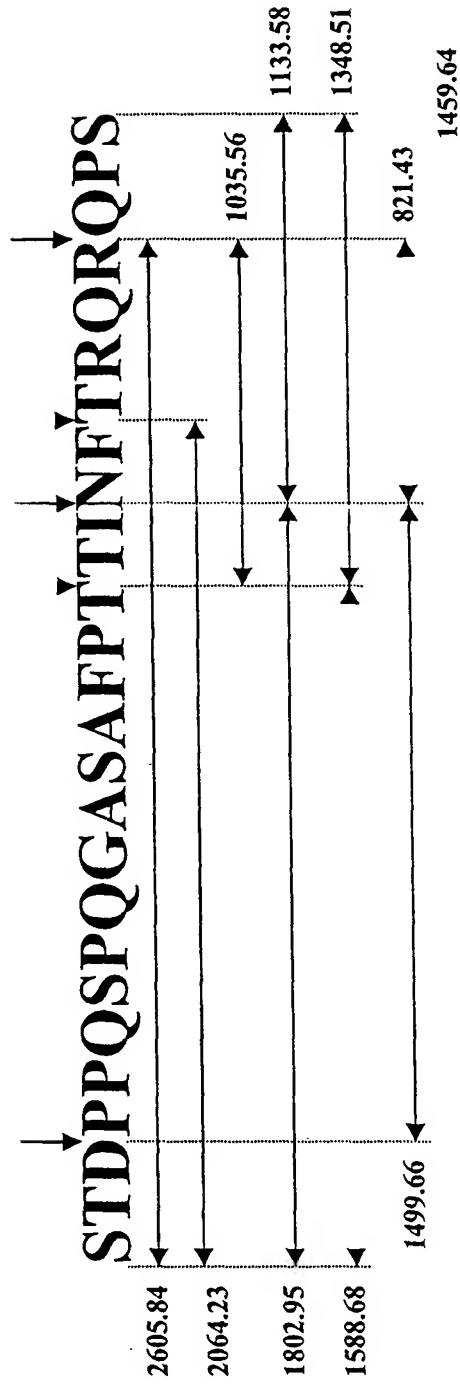


Figure 39

MAGE-1 (126-153)

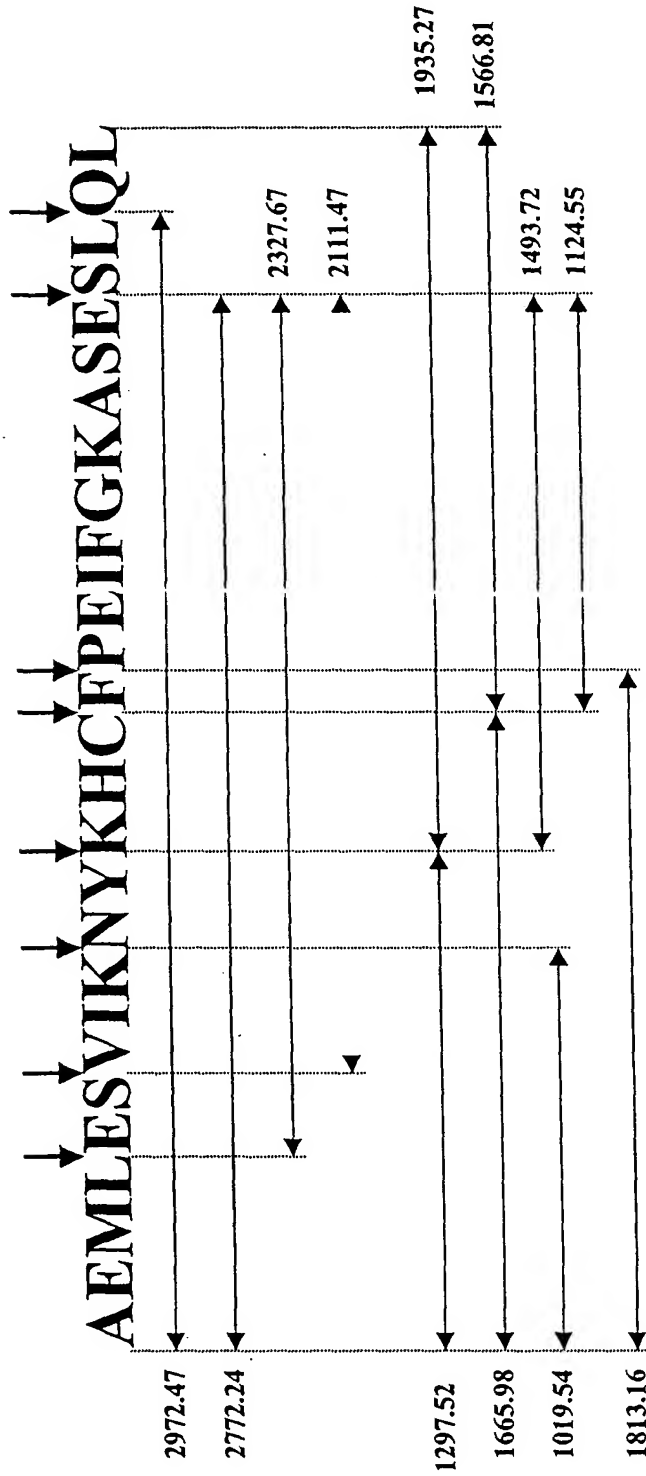


Figure 40

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

MAGE-2 (272-299)

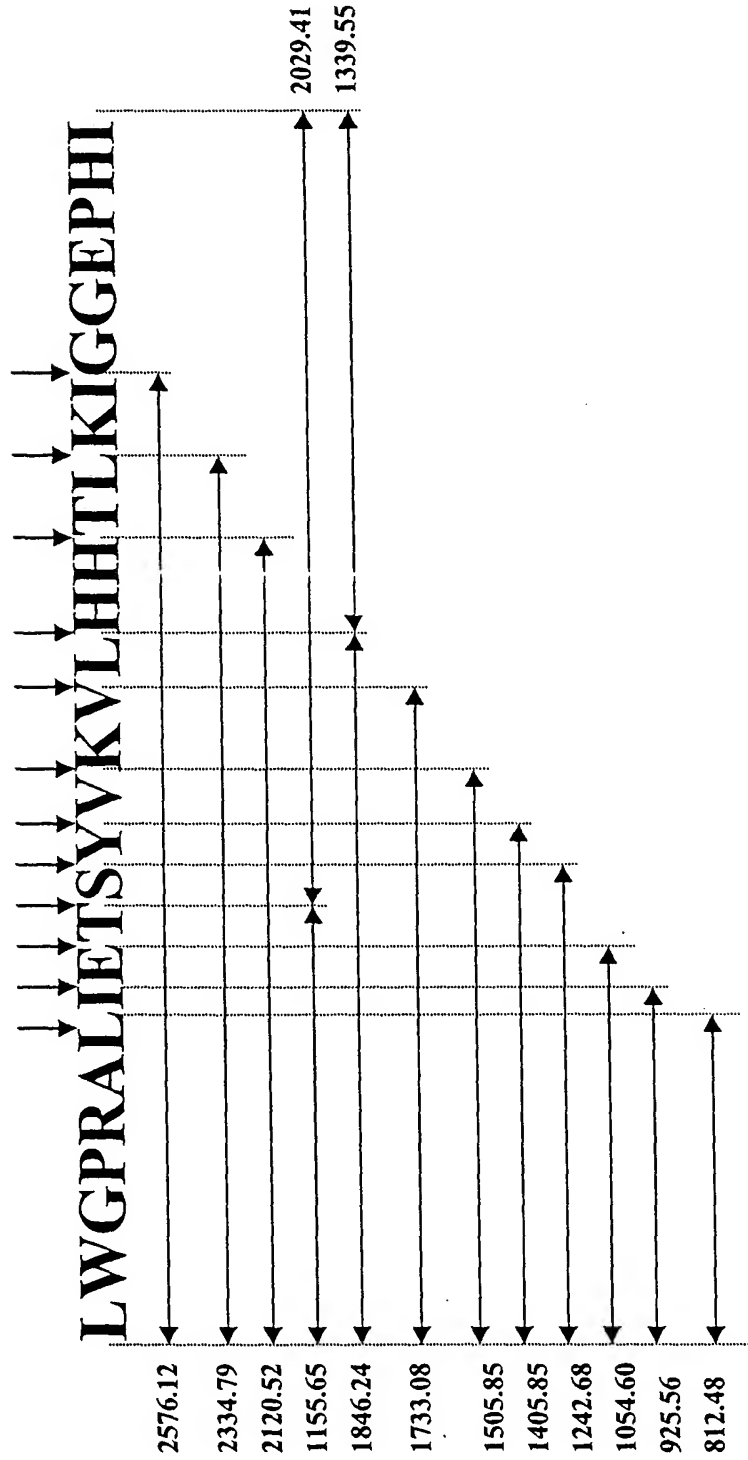


Figure 41

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

MAGE-2 (287-314)

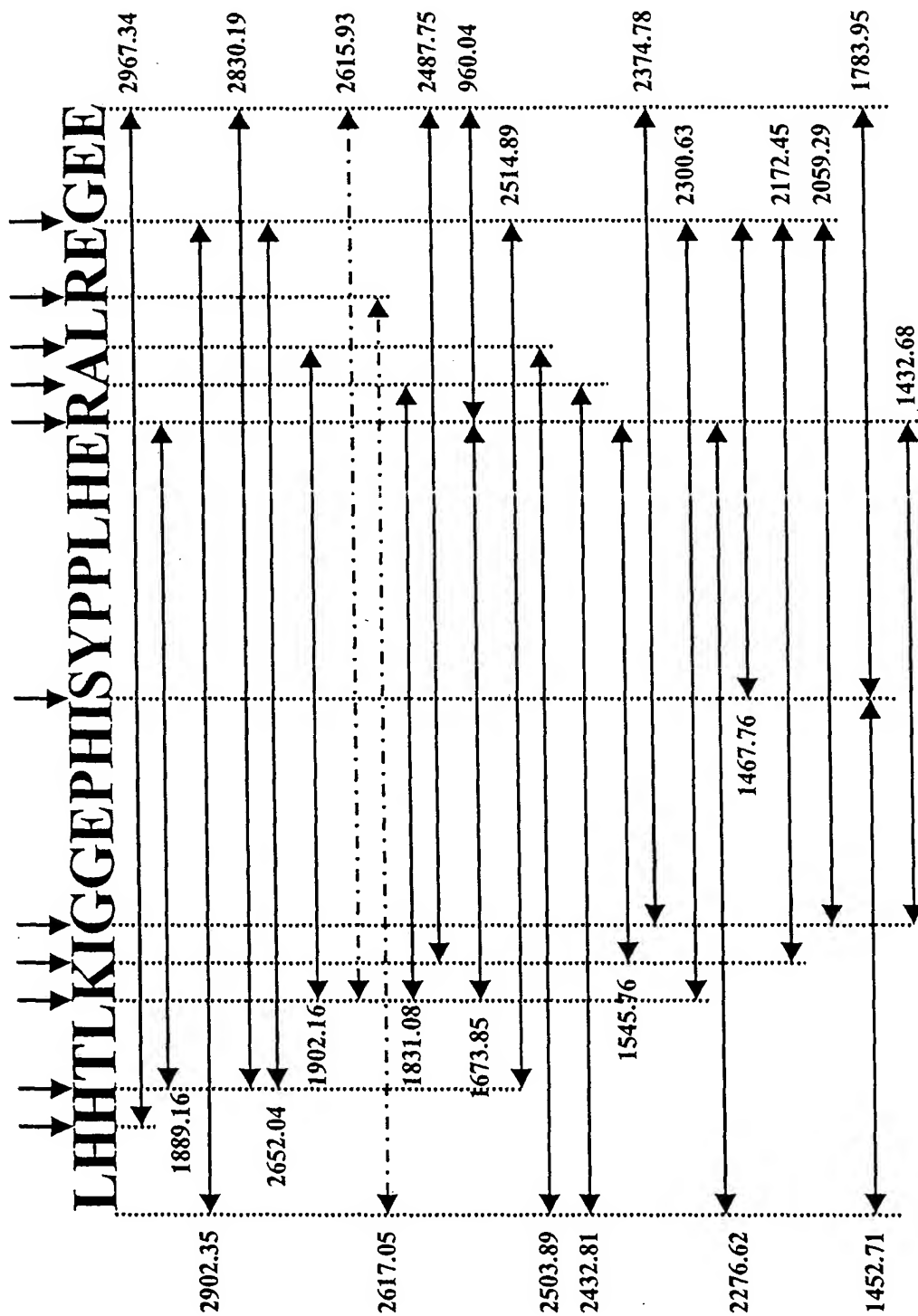


Figure 42

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

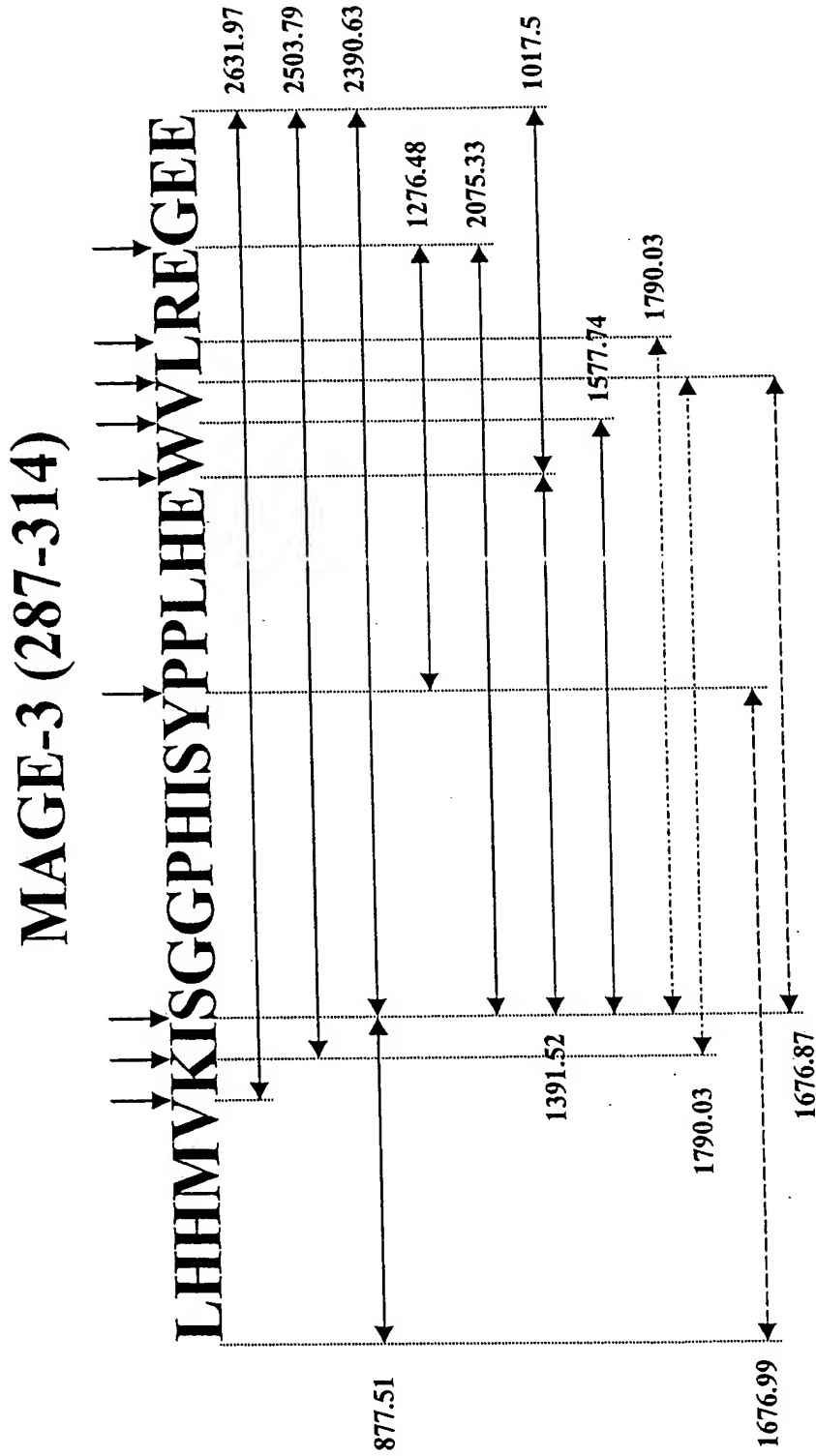


Figure 43

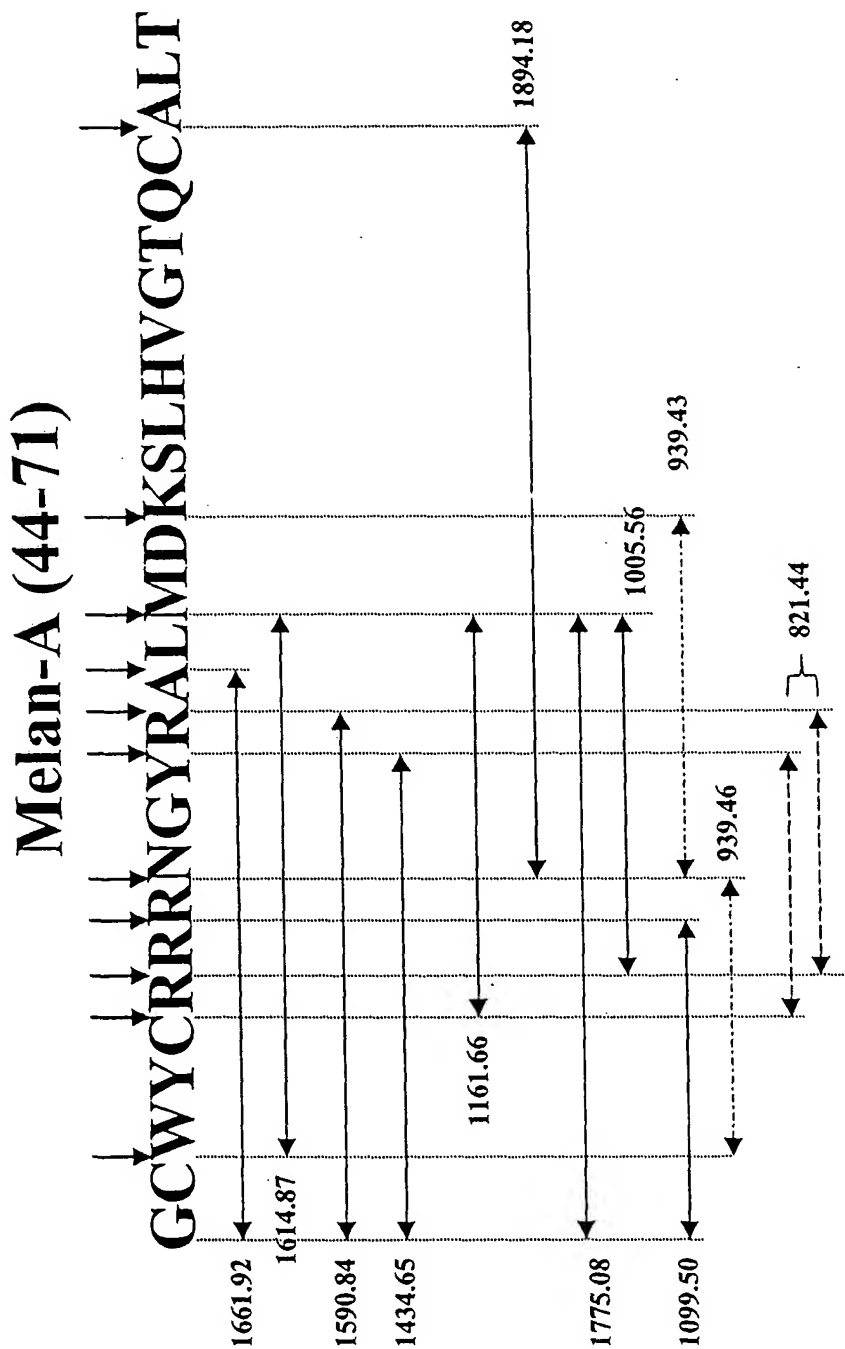


Figure 44

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

PRAME (274-301)

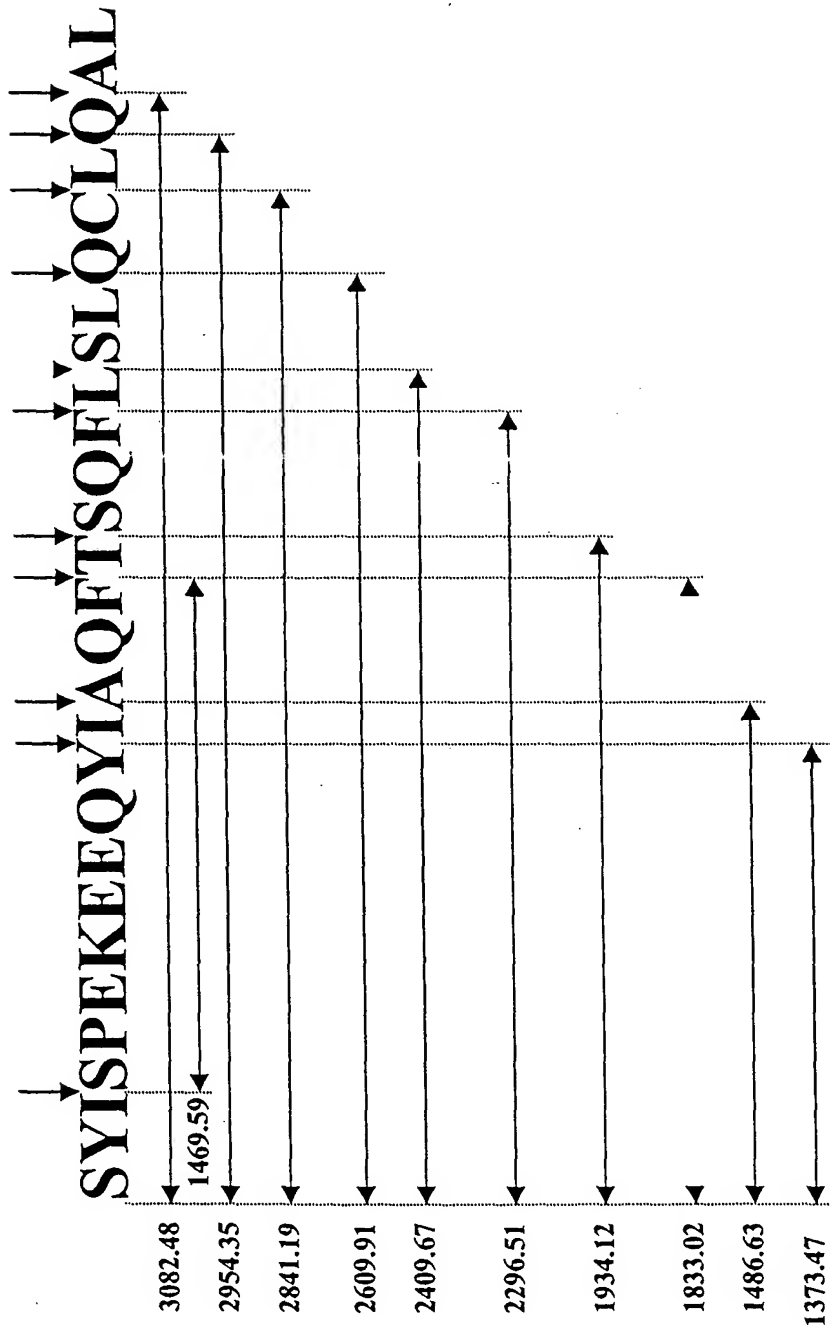


Figure 45

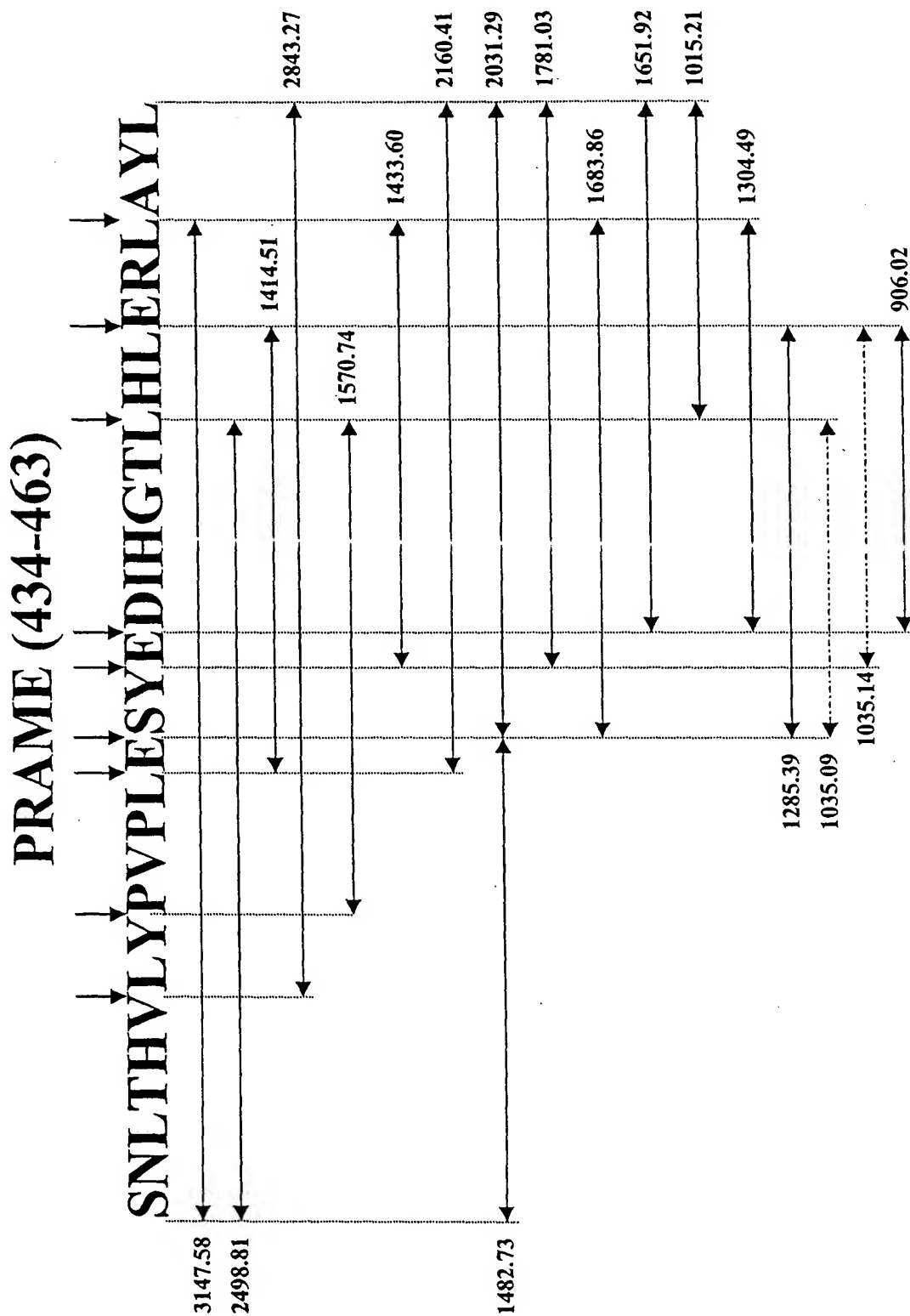


Figure 46

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

PRAME (452-480)

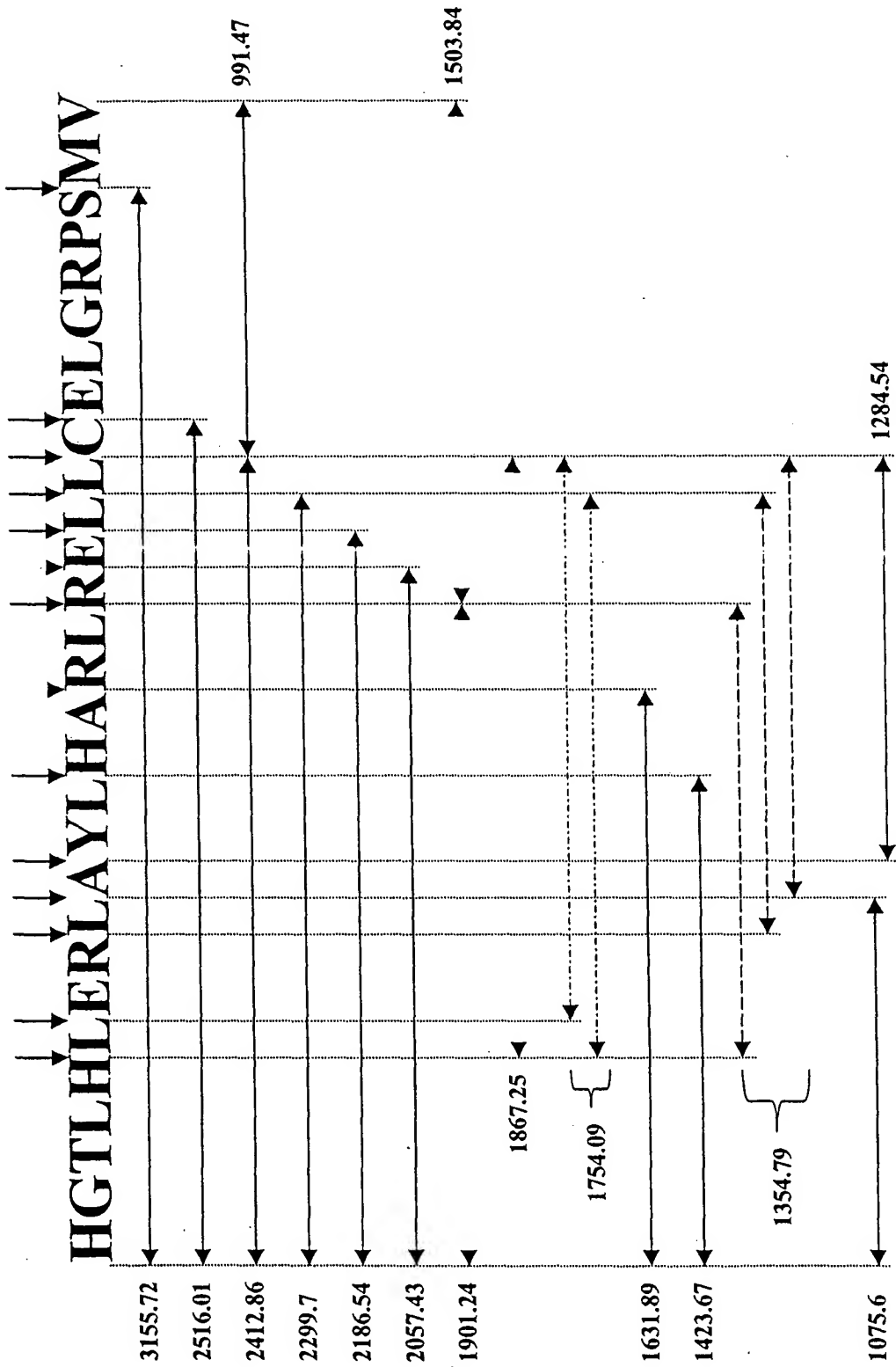


Figure 47

PSA (143-169)

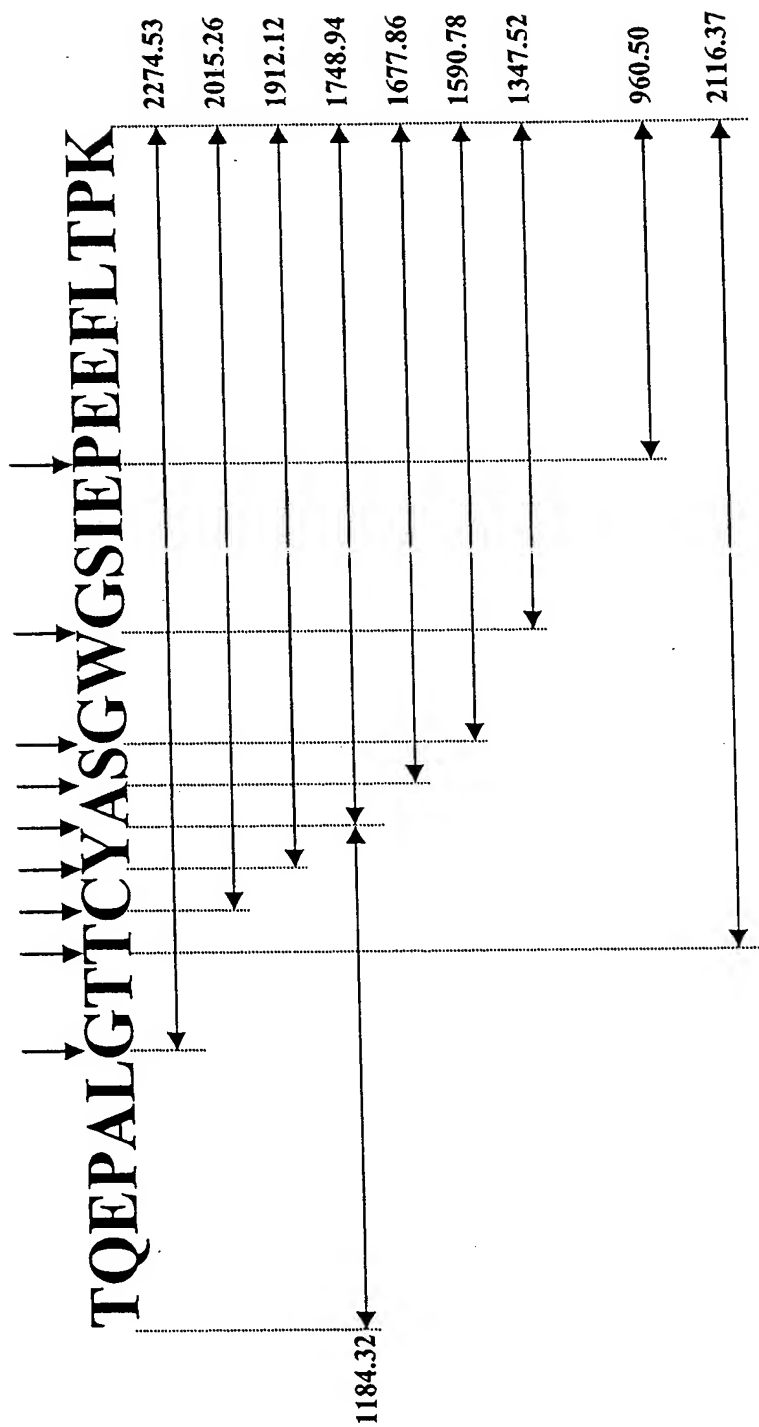


Figure 48

PSA 156-188

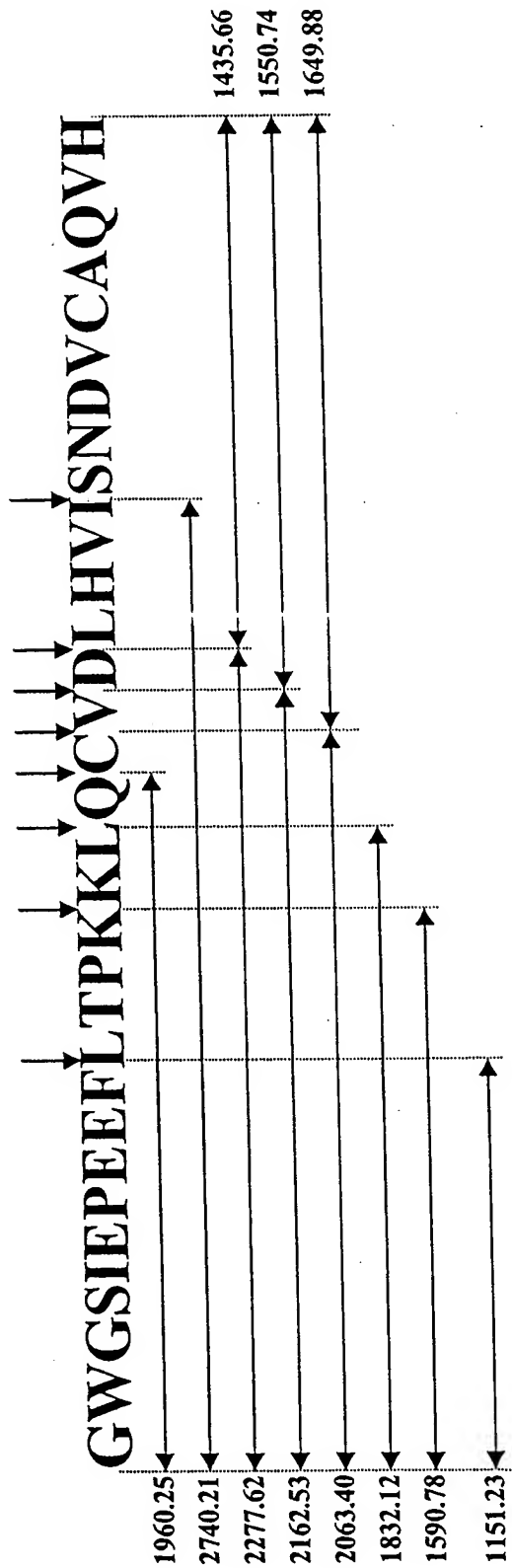


Figure 49

PSCA 67-94

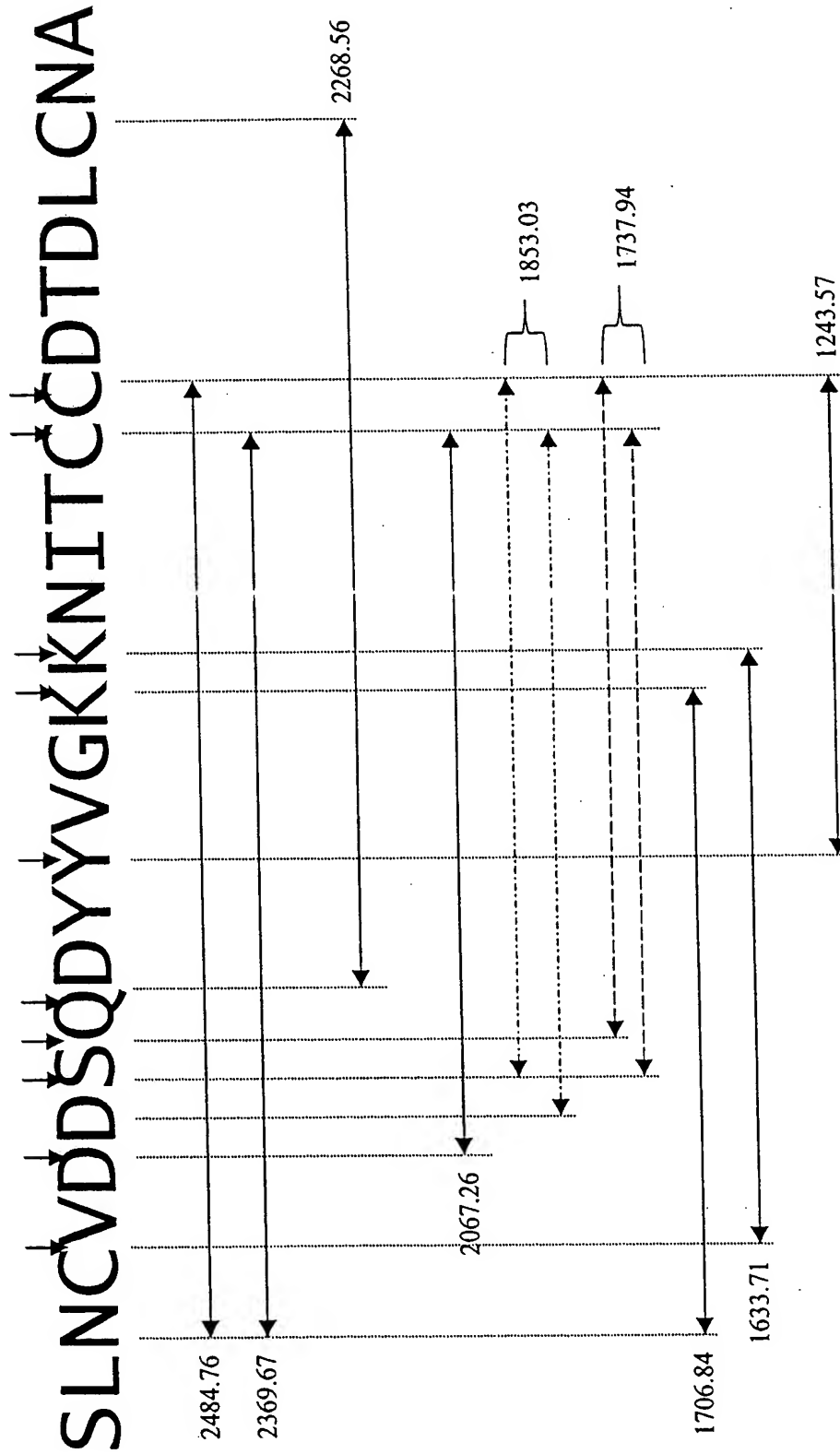


Figure 50

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

PSMA (378-405)

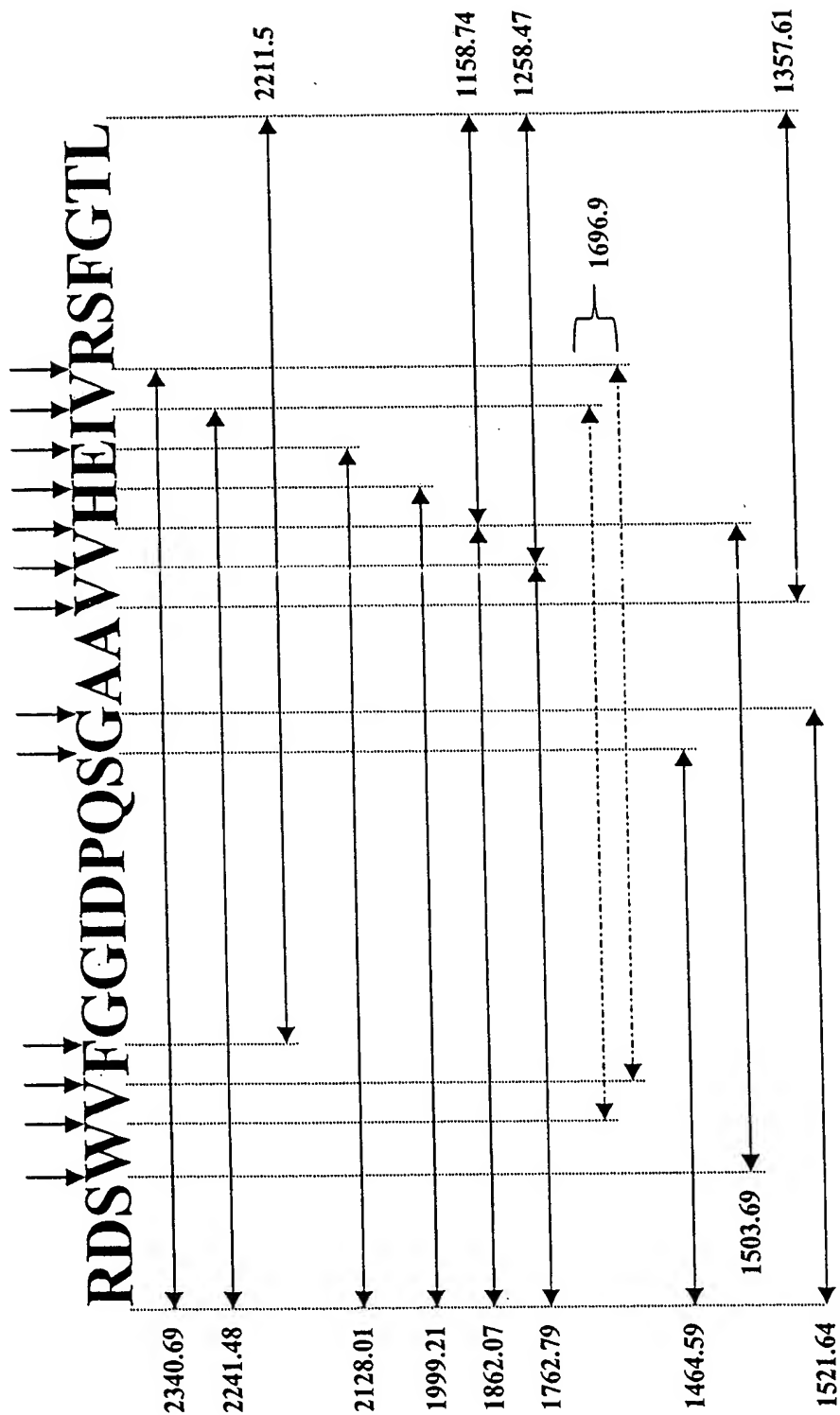


Figure 51

PSMA (597-623)

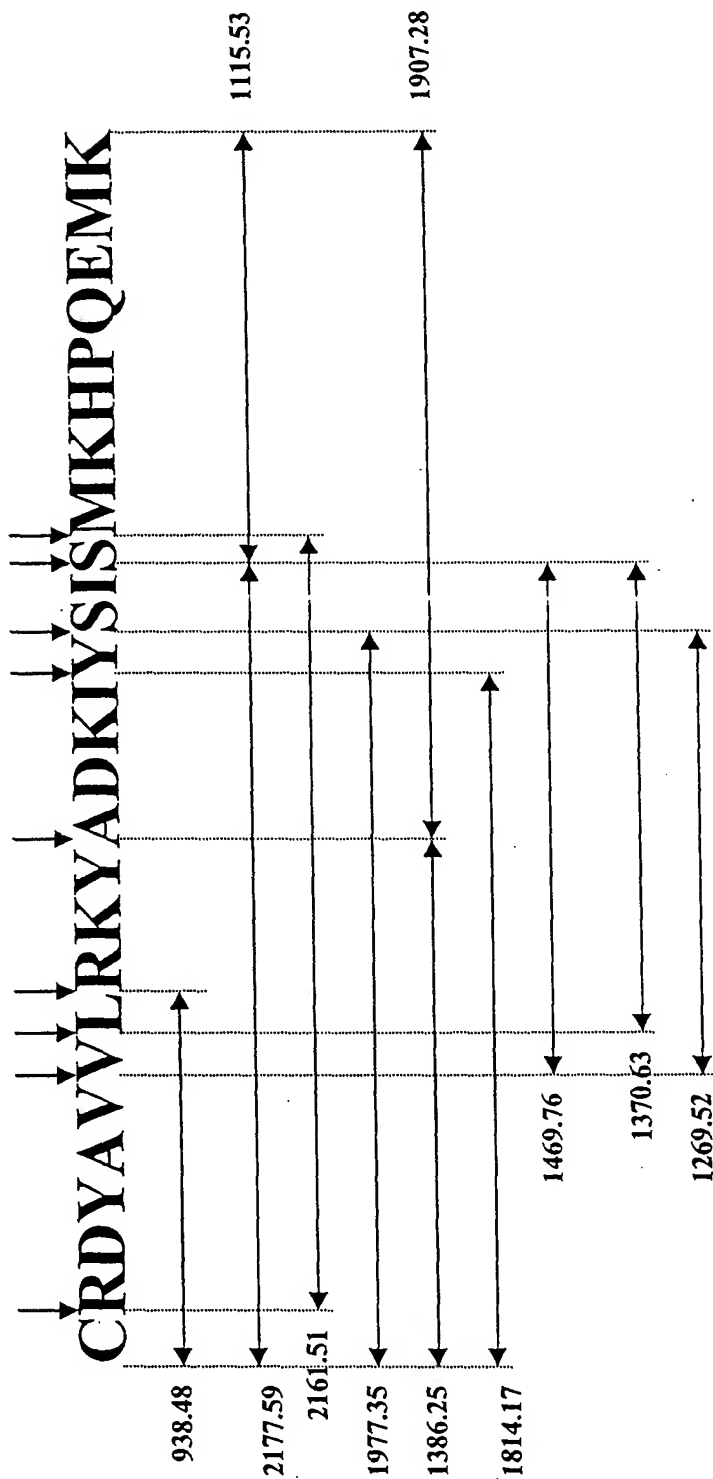


Figure 52

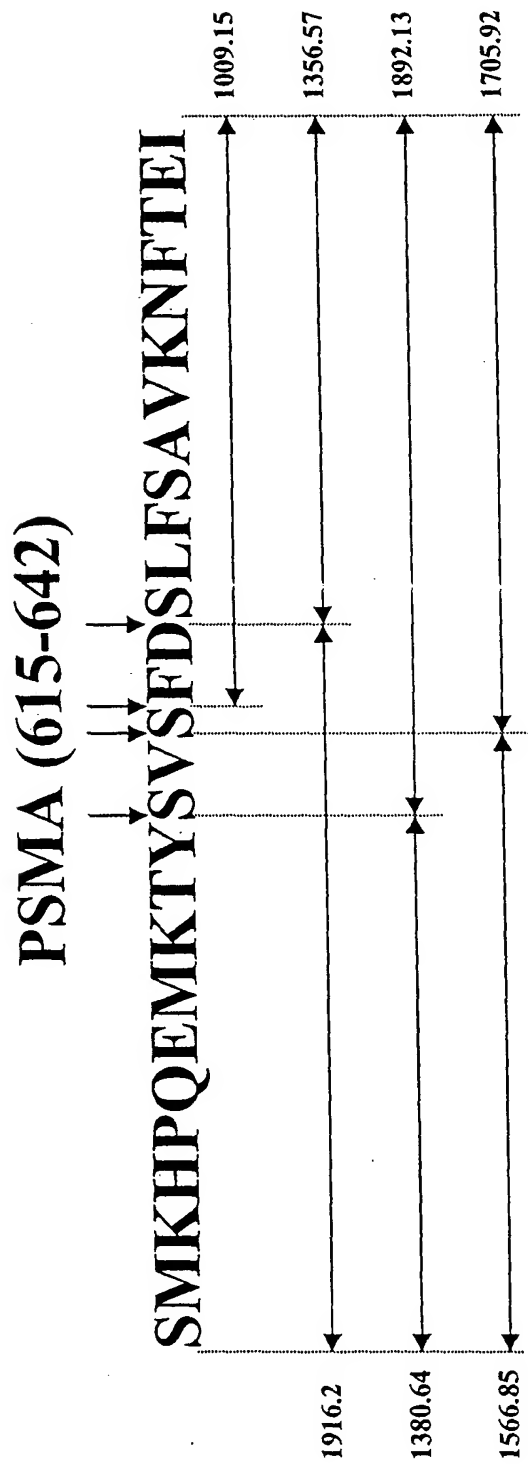


Figure 53

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

SCP-1 (57-86)

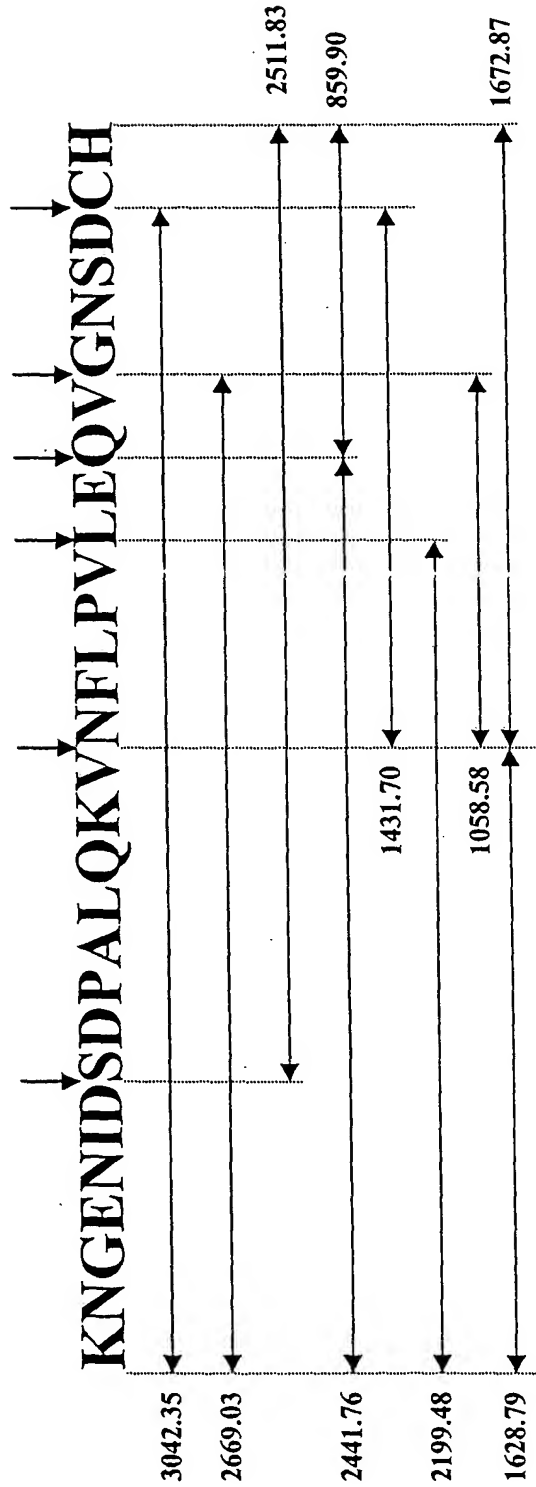


Figure 54

SCP-1 (201-227)

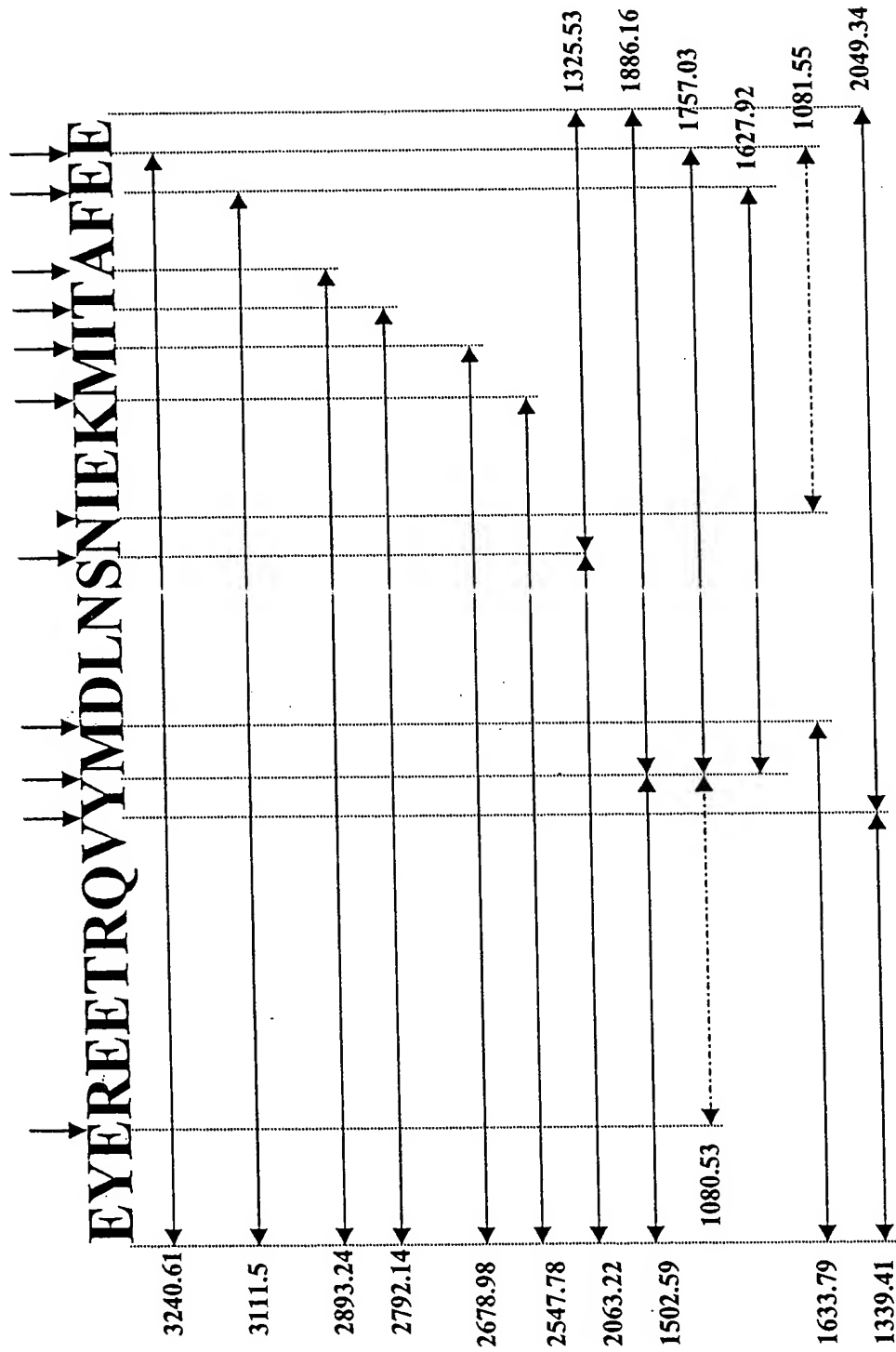


Figure 55

SCP-1 (395-424)

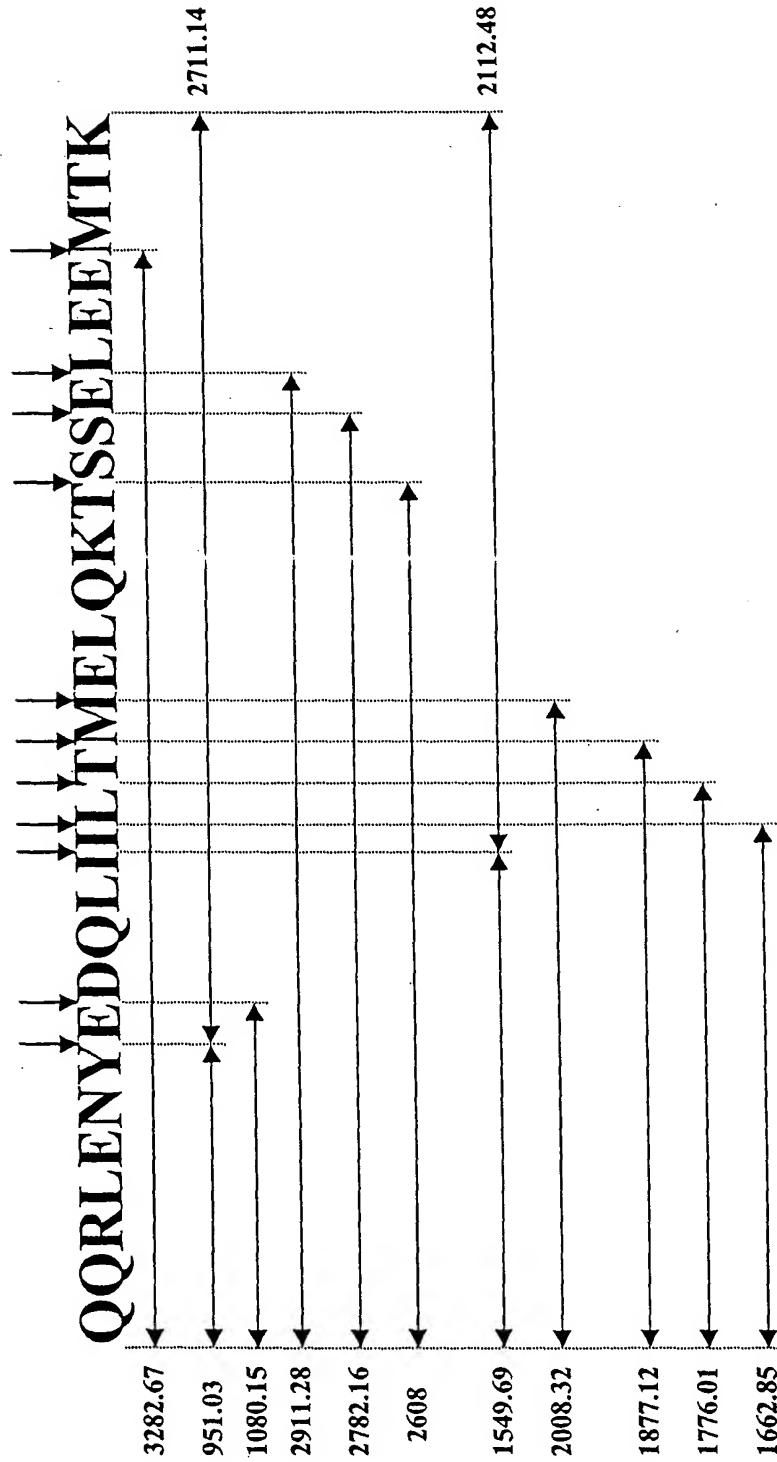


Figure 56

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

SCP-1 (416-442)

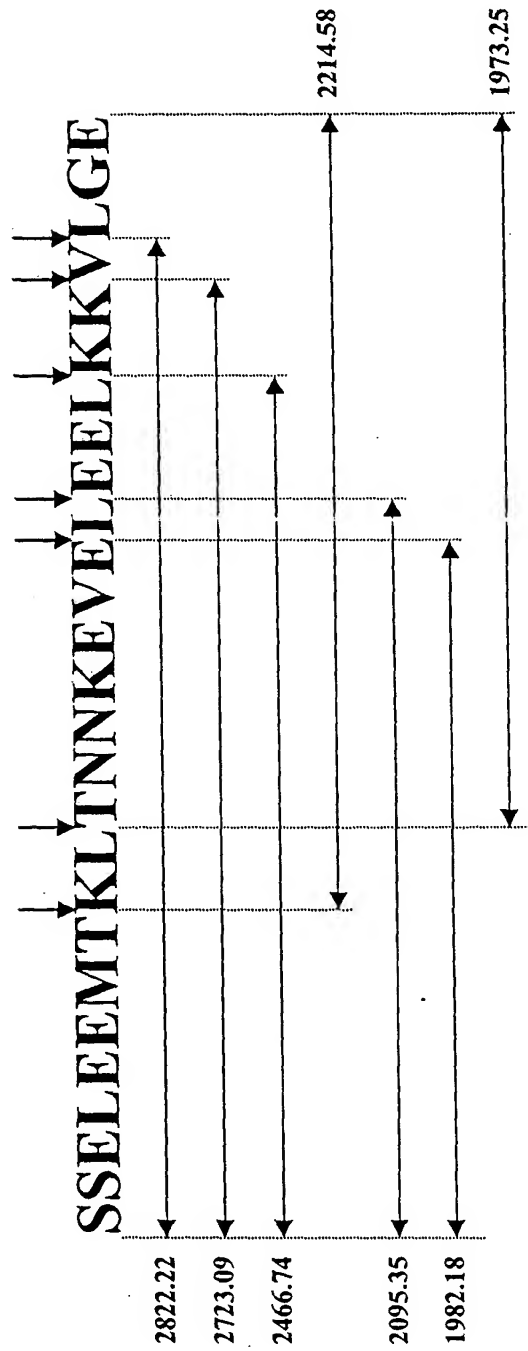


Figure 57

SCP-1 (518-545)

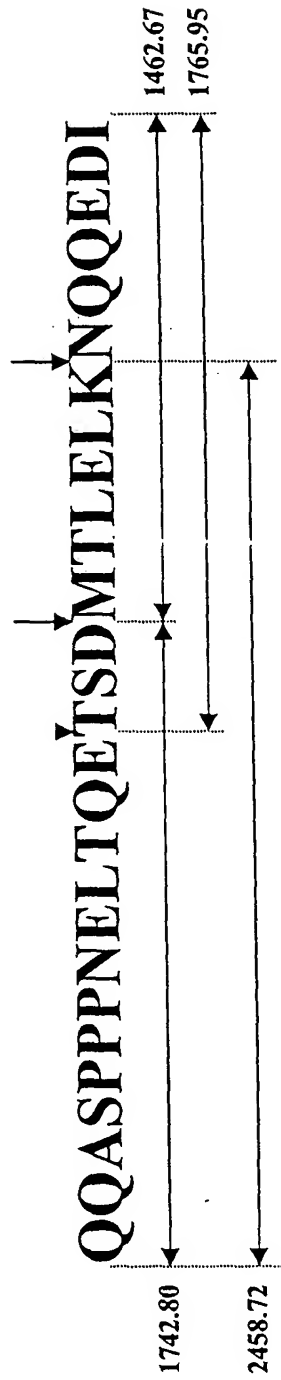


Figure 58

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

SCP-1 (545-578)

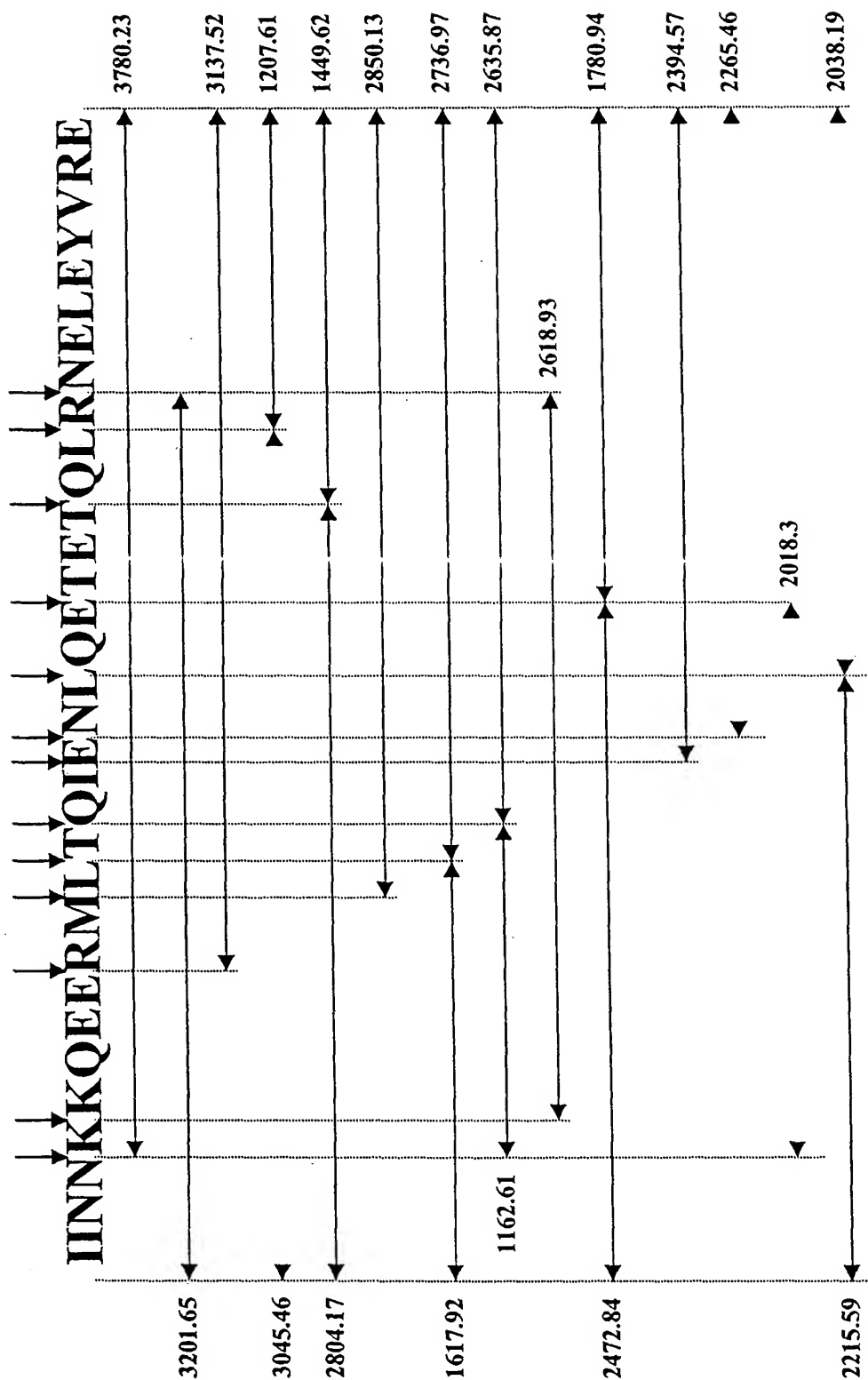


Figure 59

SCP-1 (559-585)

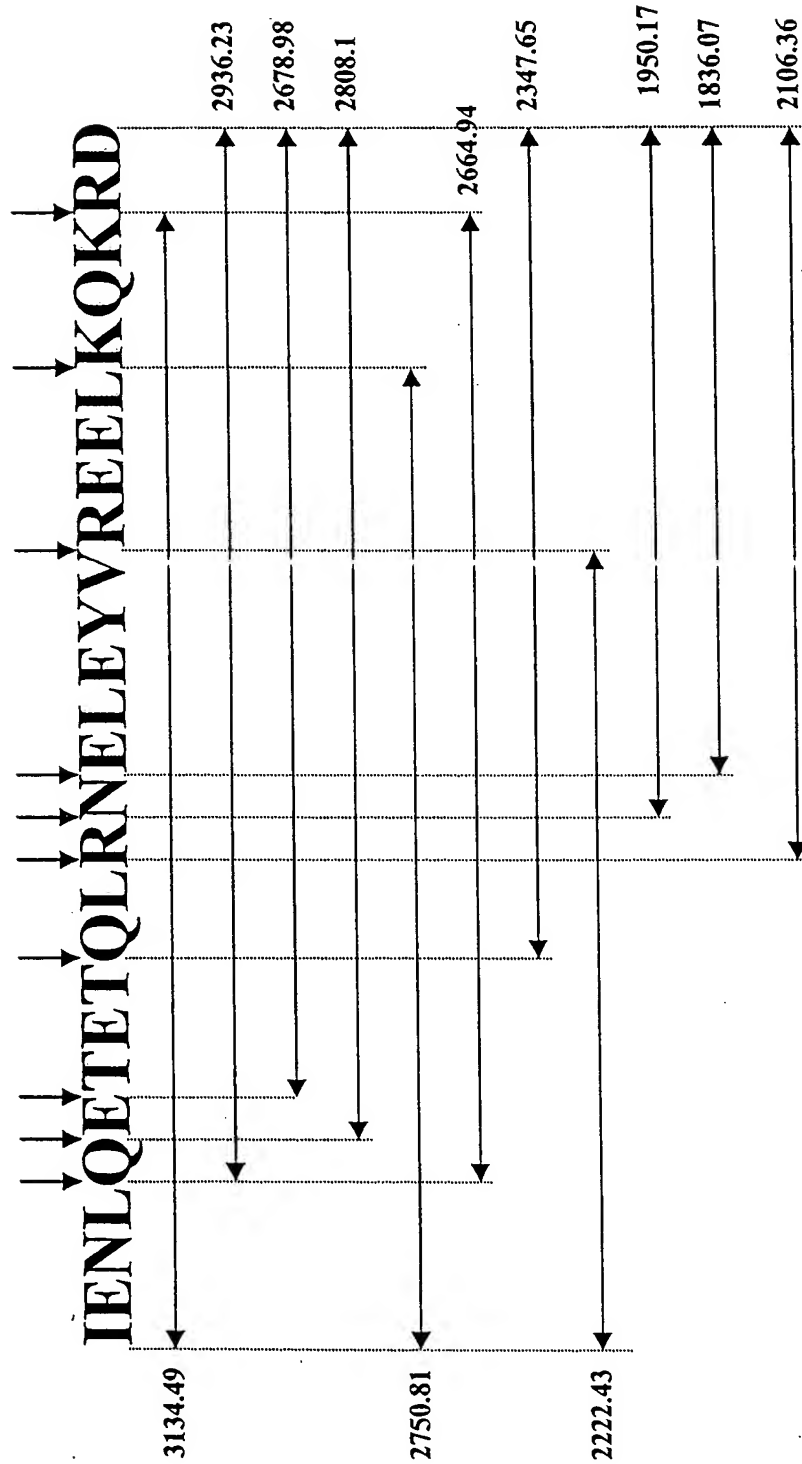


Figure 60

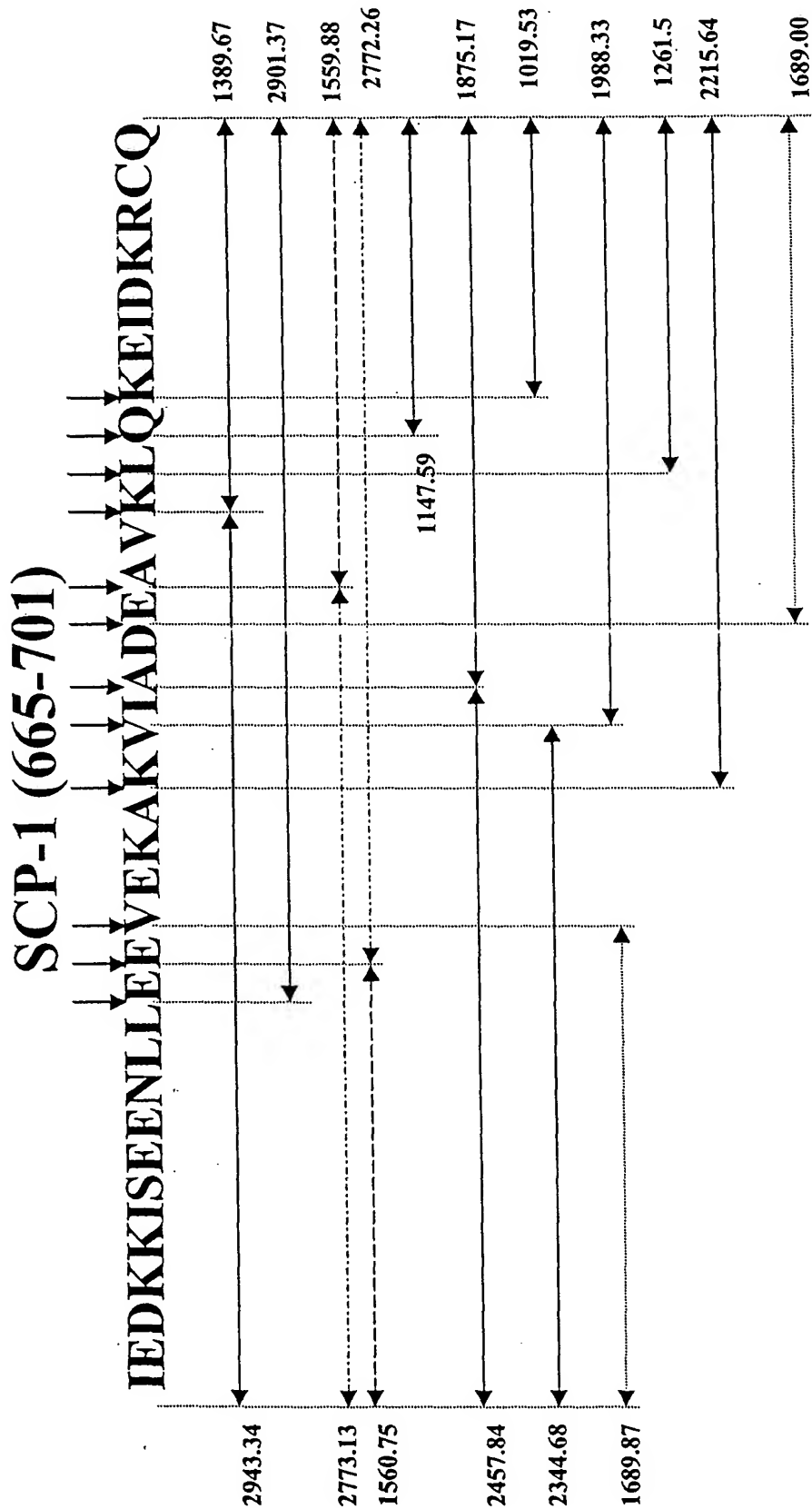


Figure 61

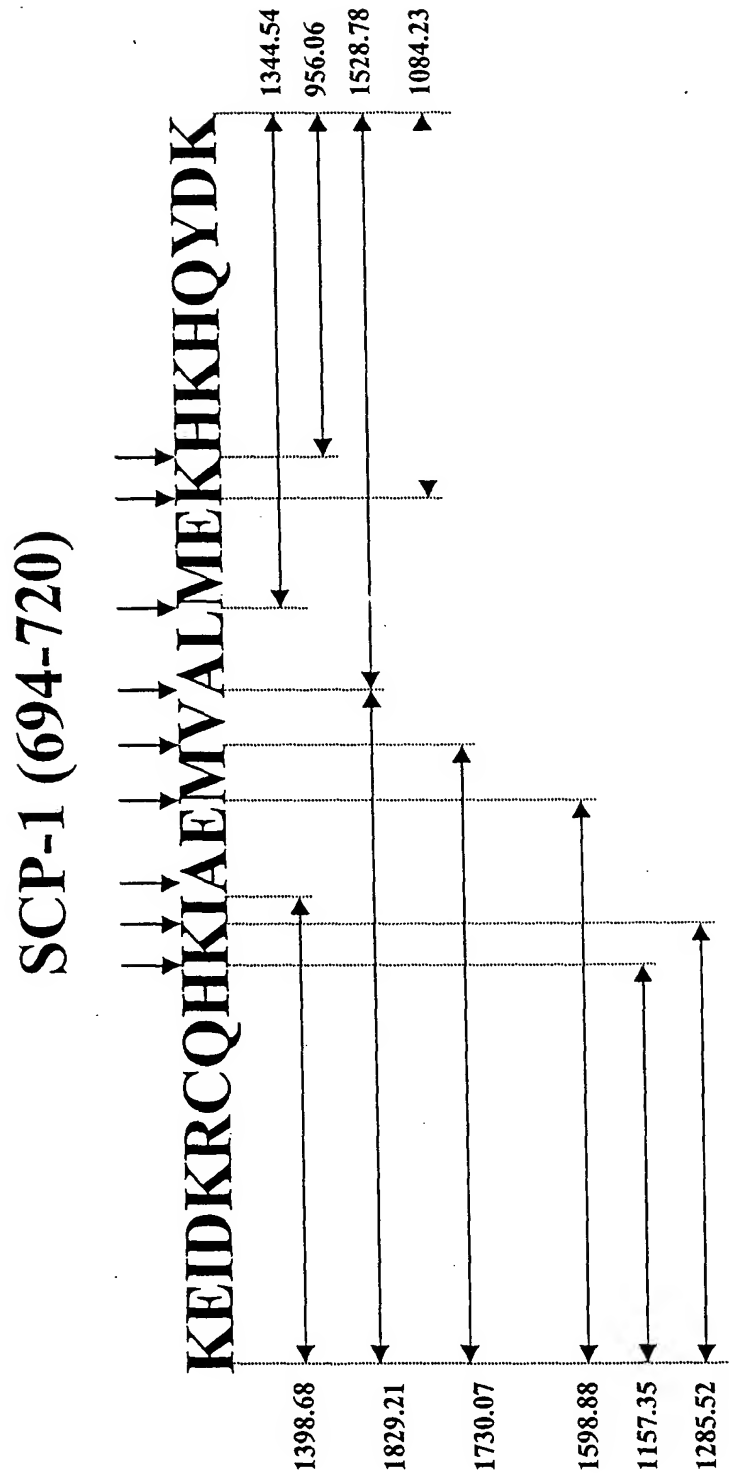


Figure 62

EPITOPE SEQUENCES
Simard et al.
Appl. No.: Unknown Atty Docket: MANNK.032A

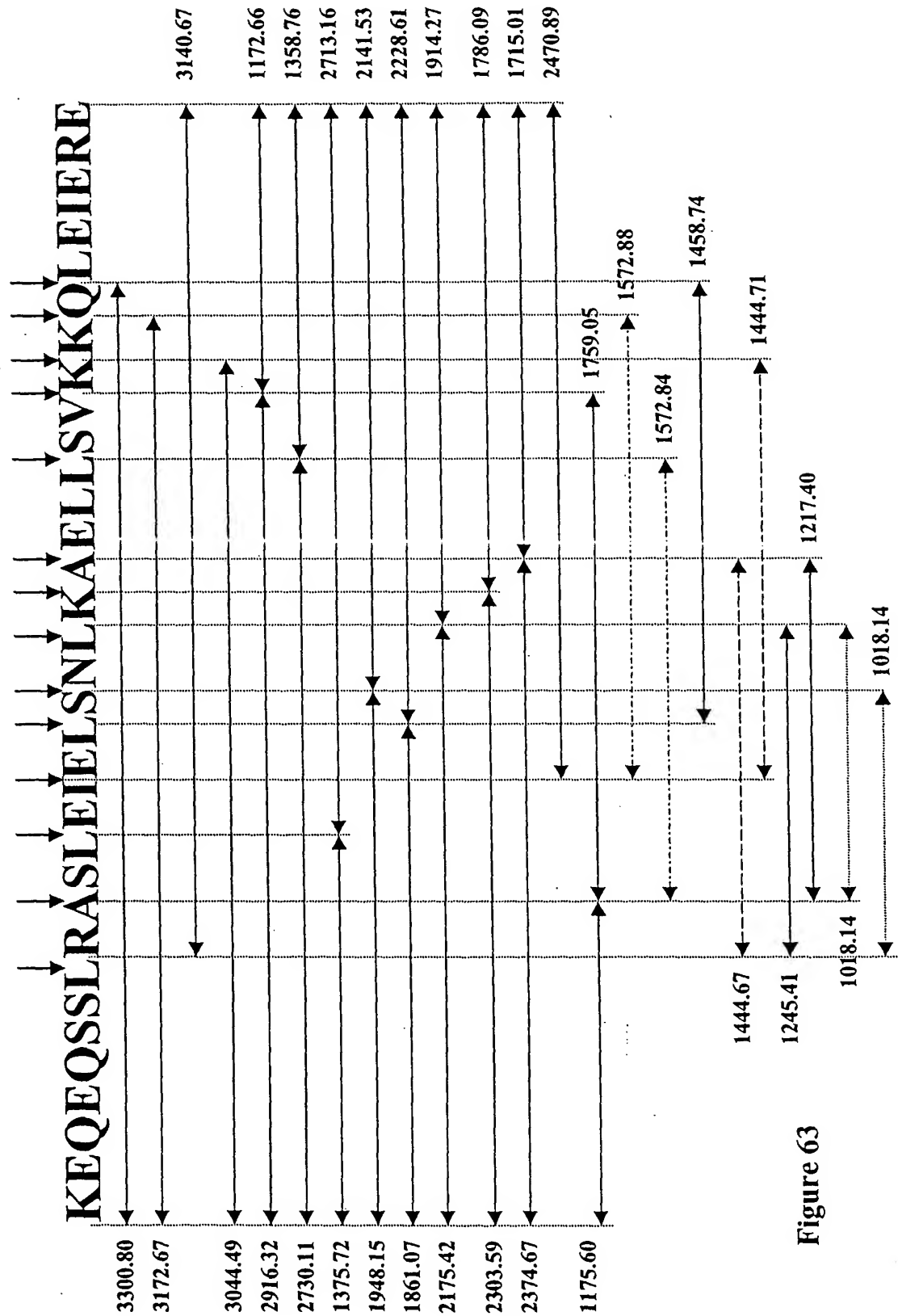


Figure 63

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

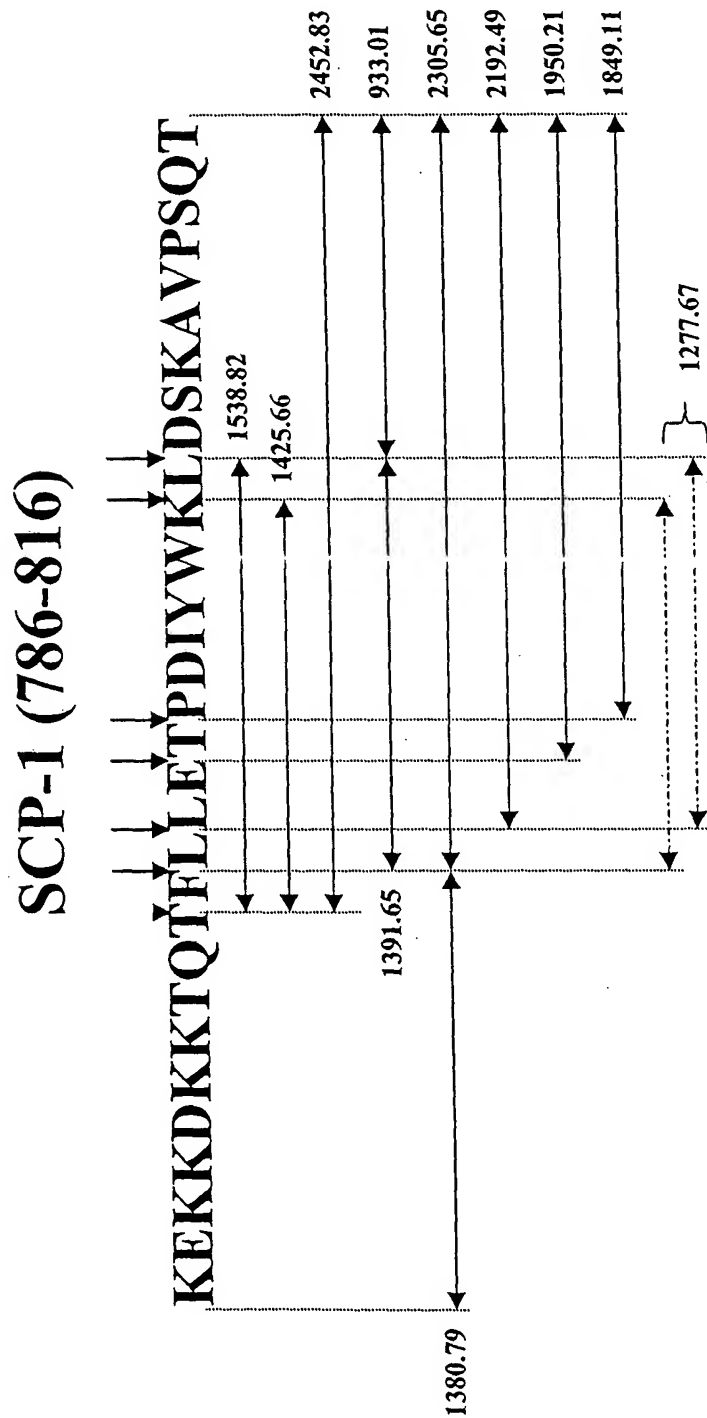


Figure 64

SCP-1 (806-833)

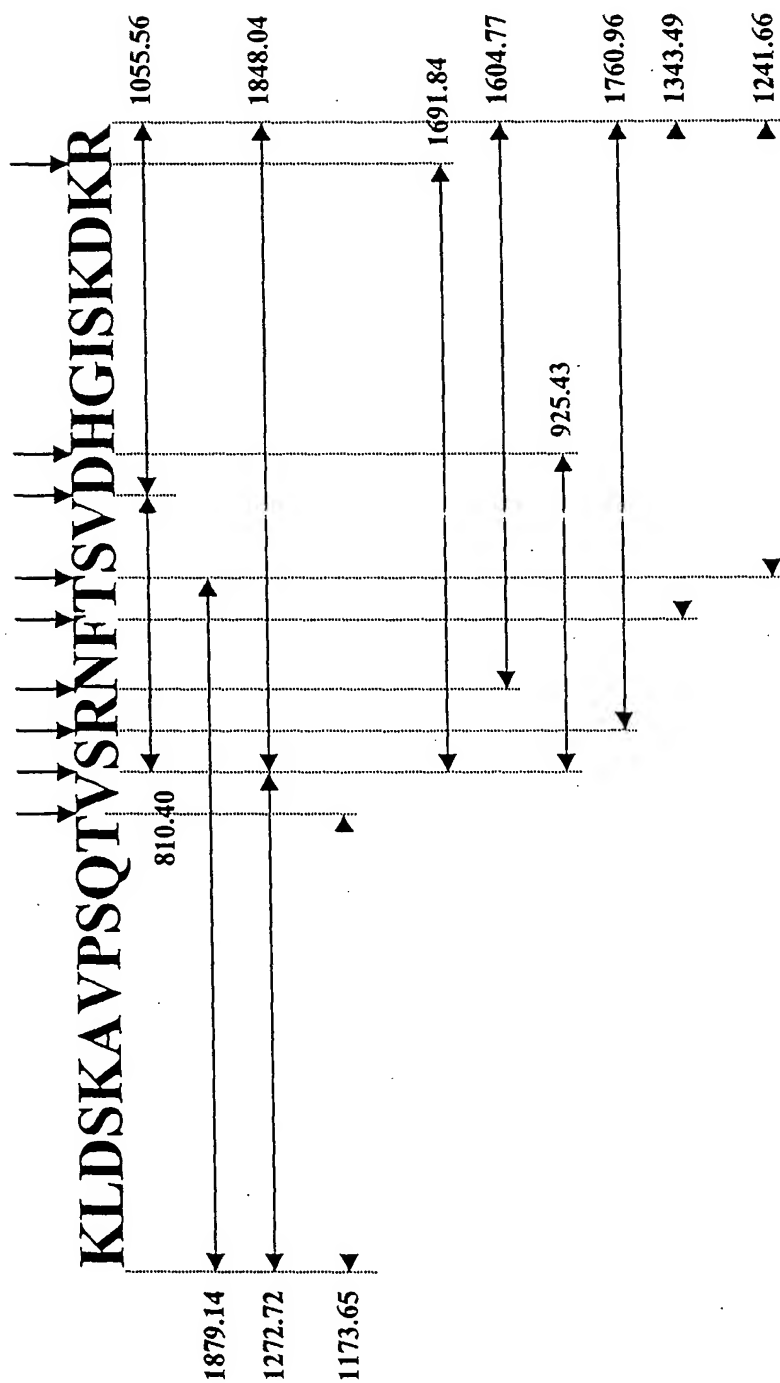


Figure 65

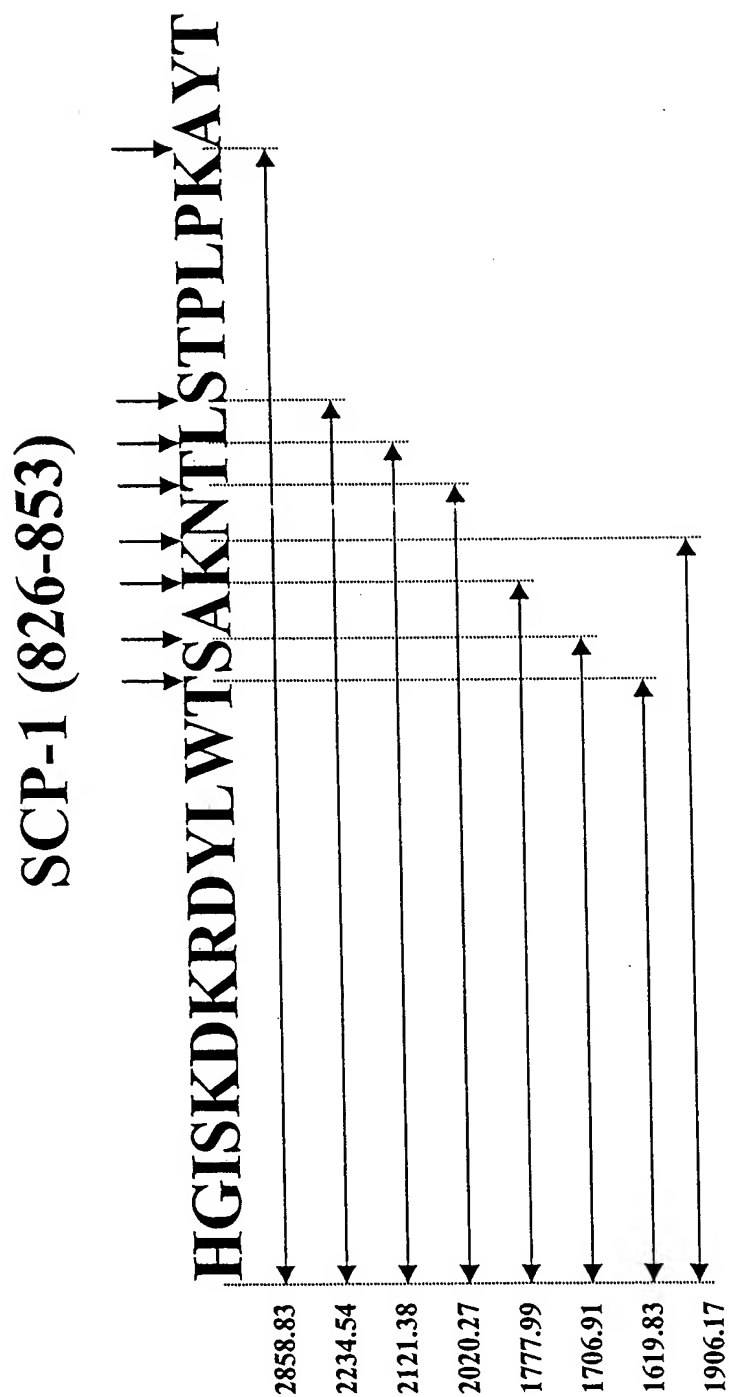


Figure 66

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

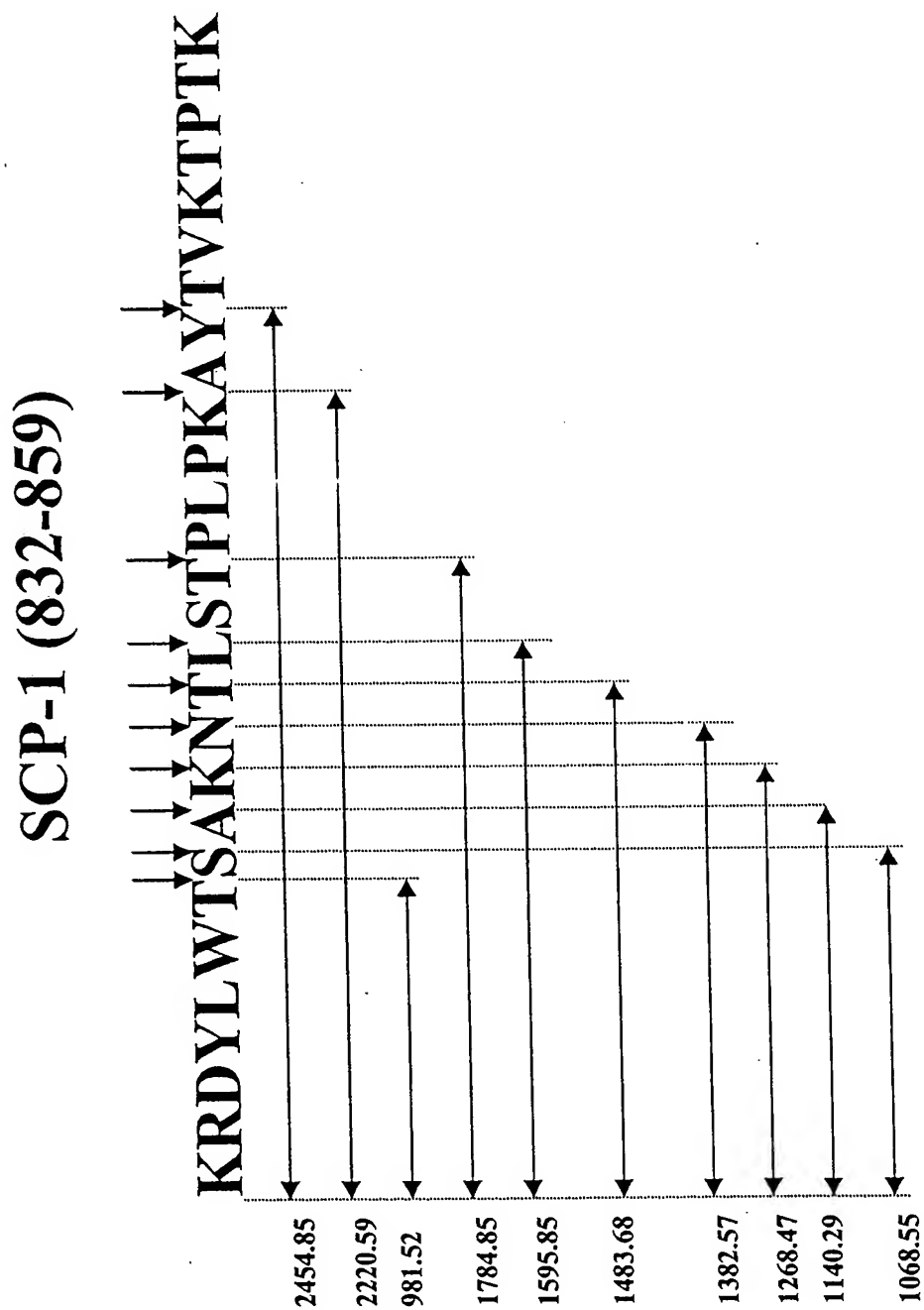


Figure 67

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

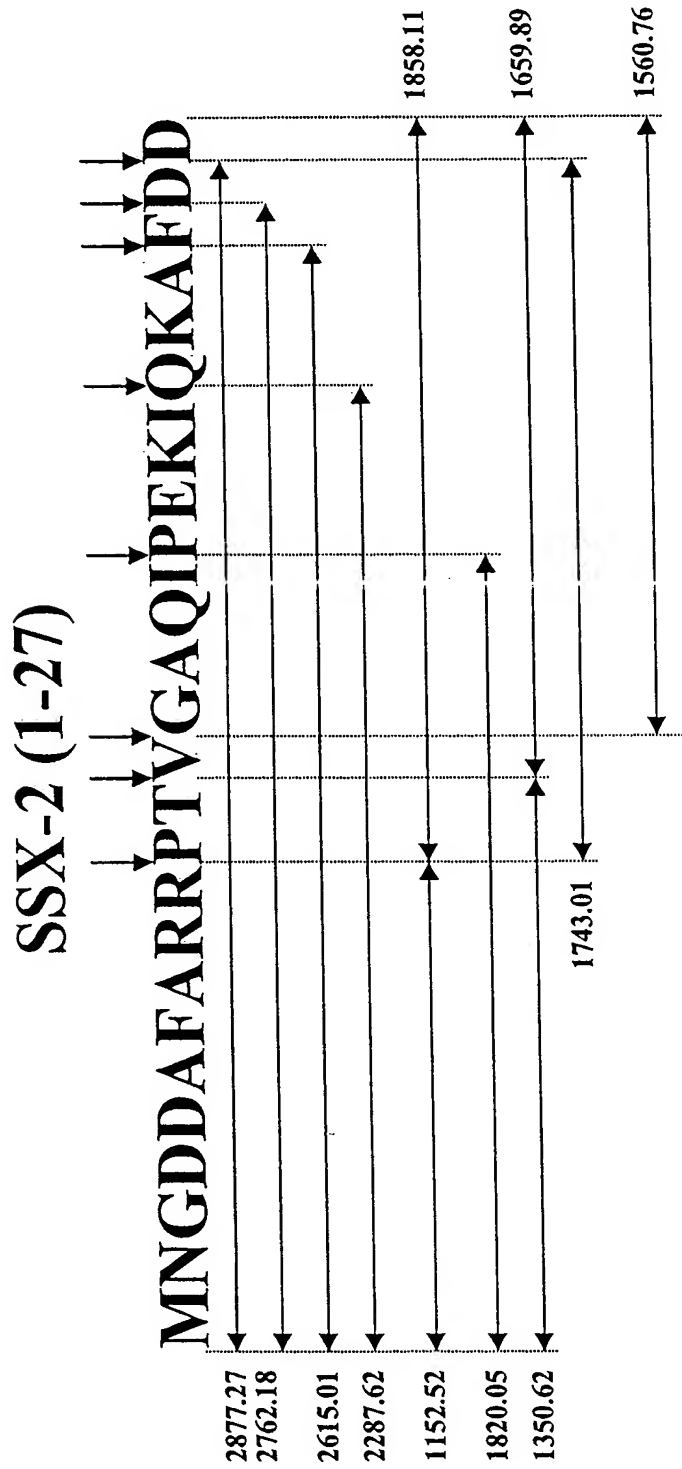


Figure 68

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

Survivin (116-142)

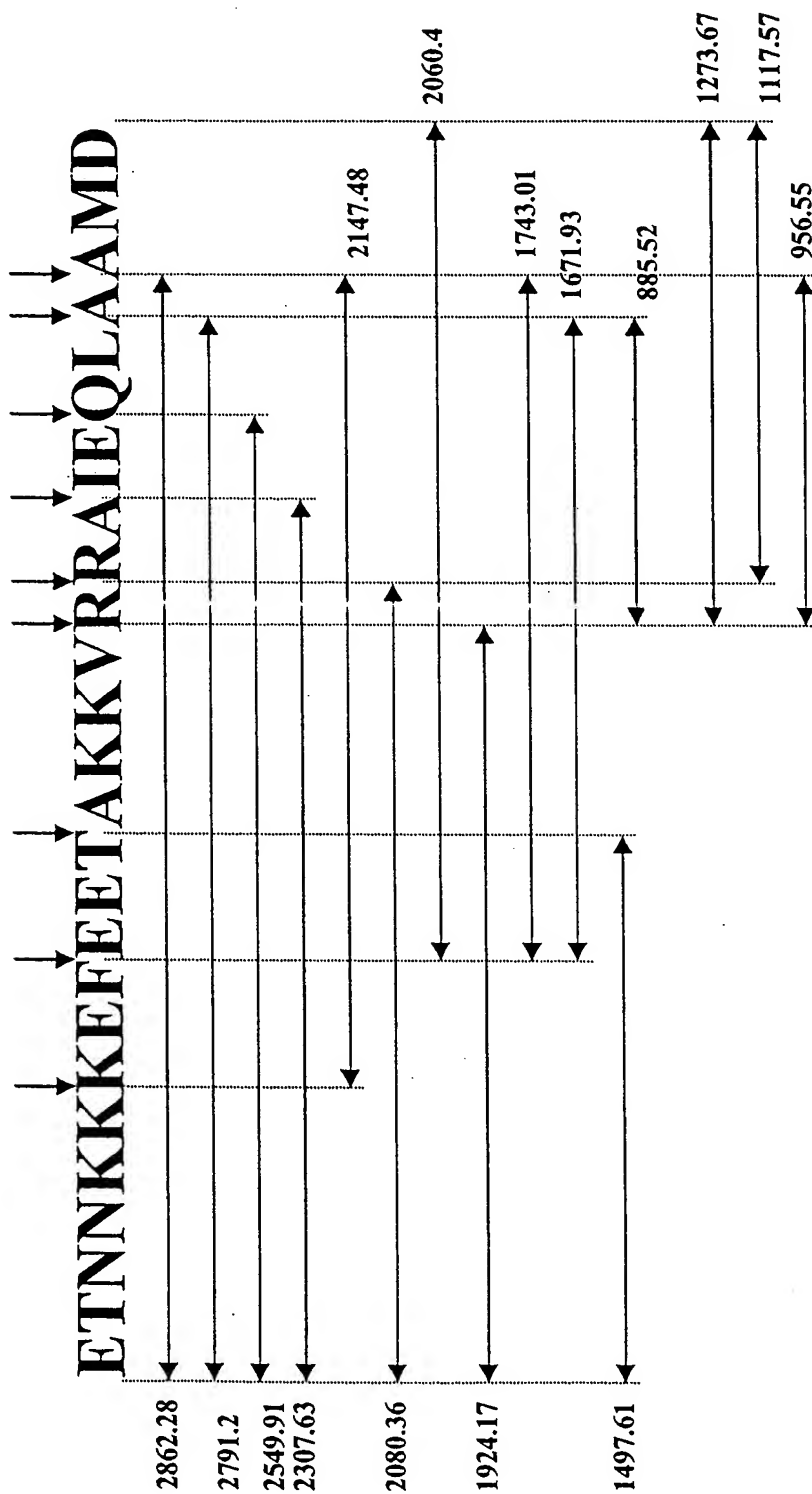


Figure 69

BAGE (1-35)

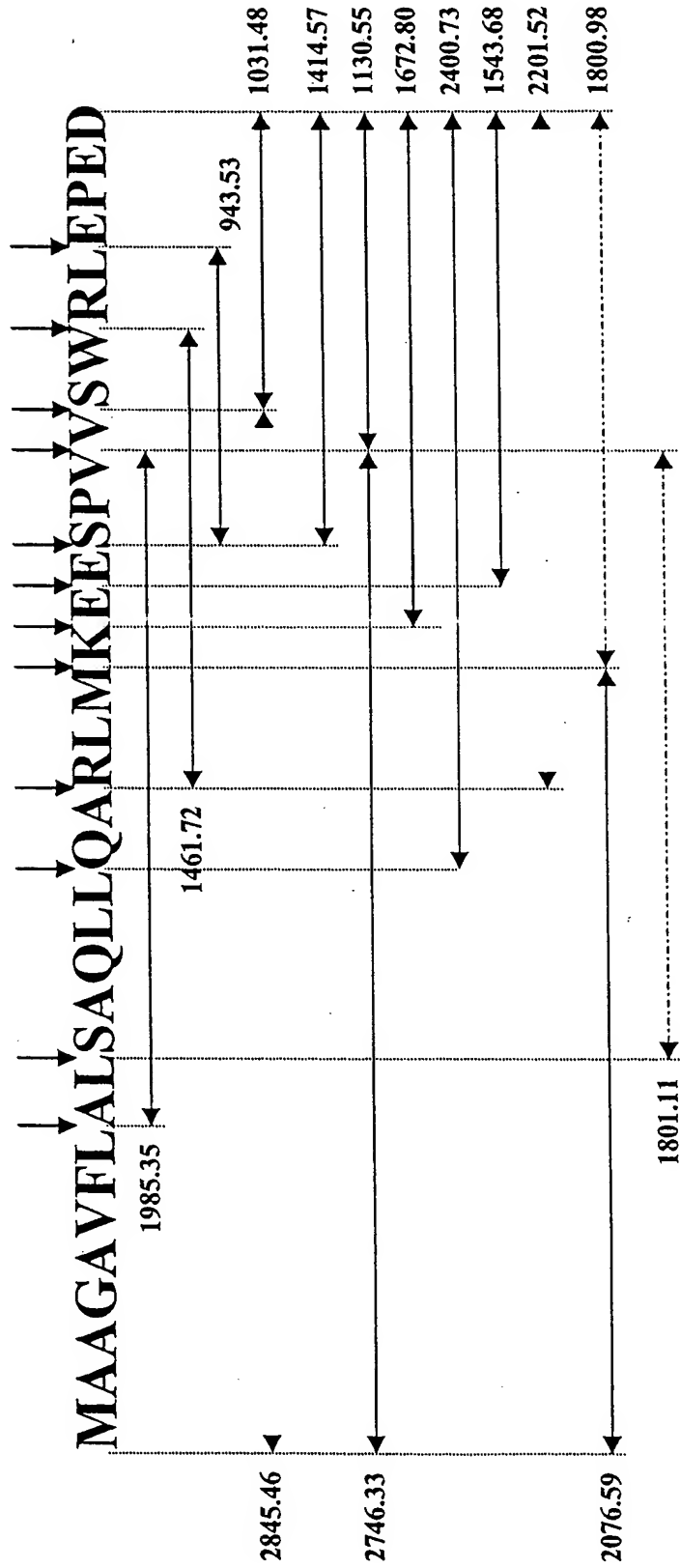


Figure 70